Pioneer *sound.vision.soul*

DVR-540H-S
DVR-440H-S

DVD RECORDER

Discover the benefits of registering your product online at **www.pioneer.co.uk (www.pioneer-eur.com)**

Operating Instructions

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

IMPORTANT

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

D3-4-2-1-1_En-A

WARNING

This equipment is not waterproof. To prevent a fire or shock hazard, do not place any container filed with liquid near this equipment (such as a vase or flower pot) or expose it to dripping, splashing, rain or moisture. D3-4-2-1-3_A_En

WARNING

Before plugging in for the first time, read the following section carefully.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., 230 V or 120 V) written on the rear panel. D3-4-2-1-4_A_En

CAUTION

This product is a class 1 laser product, but this product contains a laser diode higher than Class 1.
To ensure continued safety, do not remove any covers or attempt to gain access to the rear of the product.
Refer all servicing to qualified personnel.
The following caution labels appear on your unit.
Location: top and rear of the unit

CLASS 1
LASER PRODUCT

VRW2262 - A
CAUTION CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.
ATTENTION RADIATIONS LASER VISIBLES ET INVISIBLES DE CLASSE 3B QUAND OUVERT. ÉVITEZ TOUT EXPOSITION AU FAISCEAU.
ADVARSEL KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
VORSICHT BEI GEÖFFNETER ABDECKUNG IST SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B IM GERÄTEINNEREN VORHANDEN. NICHT DEM LASERSTRAHL AUSSETZEN!
PRECAUCIÓN CUANDO SE ABRE HAY RADIACIÓN LÁSER DE CLASE 3B VISIBLE E INVISIBLE. EVITE LA EXPOSICIÓN A LOS RAYOS LÁSER.
VARO! AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
注意 打開時會有CLASS 3B可見和不可見鐳射輻射，請勿受鐳射束輻射。
注意 ここを開くと CLASS 3B の可視レーザ光及び不可視レーザ光が出ます。ビームを直接見たり、触れたりしないこと。

D3-4-2-1-8_B_En

This product complies with the Low Voltage Directive (73/23/EEC, amended by 93/68/EEC), EMC Directives (89/336/EEC, amended by 92/31/EEC and 93/68/EEC). D3-4-2-1-9a_En

WARNING

To prevent a fire hazard, do not place any naked flame sources (such as a lighted candle) on the equipment. D3-4-2-1-7a_A_En

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for the correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health. K058_En

Operating Environment

Operating environment temperature and humidity:
+5 °C to +35 °C (+41 °F to +95 °F); less than 85 %RH
(cooling vents not blocked)
Do not install this unit in a poorly ventilated area, or in locations exposed to high humidity or direct sunlight (or strong artificial light) D3-4-2-1-7c_A_En

VENTILATION CAUTION

When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 10 cm at top, 10 cm at rear, and 10 cm at each side).

WARNING

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as newspapers, table-cloths, curtains) or by operating the equipment on thick carpet or a bed. D3-4-2-1-7b_A_En

CAUTION

The STANDBY/ON switch on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation). D3-4-2-2-2a_A_En

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period. K041_En

If the AC plug of this unit does not match the AC outlet you want to use, the plug must be removed and appropriate one fitted. Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel. If connected to an AC outlet, the cut-off plug can cause severe electrical shock. Make sure it is properly disposed of after removal.
The equipment should be disconnected by removing the mains plug from the wall socket when left unused for a long period of time (for example, when on vacation). D3-4-2-2-1a_A_En

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement. S002_En

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT: THE MOULDED PLUG

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be obtained from your local dealer.

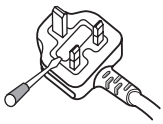
If the fitted moulded plug is unsuitable for your socket outlet, then the fuse shall be removed and the plug cut off and disposed of safely. There is a danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

If a new plug is to be fitted, please observe the wiring code as shown below. If in any doubt, please consult a qualified electrician.

WARNING : THIS APPARATUS MUST BE EARTHED.
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:
Green & Yellow : Earth Blue : Neutral Brown : Live
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows ;

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter **E** or by the earth symbol or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter **N** or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter **L** or coloured RED.



How to replace the fuse: Open the fuse compartment with a screwdriver and replace the fuse.

D3-4-2-1-2-1_B_En

Contents

01 Before you start

What's in the box 6
Putting the batteries in the remote control 6
Using the remote control 6
Disc / content format playback compatibility 7
About the internal hard disk drive 12
Symbols used in this manual 13

02 Connecting up

Rear panel connections 14
Front panel connections 15
Easy connections 16
Using other types of audio/video output . 17
Connecting to a cable box, satellite receiver or digital terrestrial receiver 18
Connecting an external decoder box (1) . 20
Connecting an external decoder box (2) . 21
Connecting to an AV amplifier/receiver . . 22
Connecting other AV sources 23
Plugging in 23

03 Controls and displays

Front panel 24
Display 25
Remote control 26

04 Getting started

Switching on and setting up 29
Setting up the GUIDE Plus+® system . . 32

05 Using the GUIDE Plus+® electronic program guide

The GUIDE Plus+® system 36
Using the GUIDE Plus+® system 37
Areas 39
GUIDE Plus+® FAQ and troubleshooting 49

06 Recording

About DVD recording 52
About HDD recording 53
Recorded audio 54
Restrictions on video recording 54
Using the built-in TV tuner 55
Setting the picture quality/recording time 56
Basic recording from the TV 57
Pause Live TV 58
Setting a timer recording 59
Timer recording FAQ 62
Simultaneous recording and playback (Chase Play) 63
Recording from an external component 63
Playing your recordings on other DVD players 64
Initializing recordable DVD discs 66

07 Playback

Introduction 67
Basic playback 67
Using the Disc Navigator to browse the contents of a disc 72
Scanning discs 73
Playing in slow motion 74
Frame advance/frame reverse 74
The Play Mode menu 74

Displaying and switching subtitles 77
Switching DVD and DivX soundtracks . . . 78
Switching audio channels 78
Switching camera angles 79
Displaying disc information on-screen . . 79

08 Editing
Editing options 81
The Disc Navigator screen 82

09 Copying and backup
Introduction 94
One Touch Copy 95
Using Copy Lists 96
Using disc backup 102

10 Using the Jukebox
Copying music to the HDD 104
Playing music from the Jukebox 105
Editing Jukebox albums 106

11 The PhotoViewer
Locating JPEG picture files 107
Playing a slideshow 107

12 The Disc Setup menu
Basic settings 109
Initialize settings 110
Finalize settings 110
Optimize HDD 111
Initialize HDD 111

13 The Video Adjust menu
Setting the picture quality for TV and external inputs 112
Setting the picture quality for disc playback 114

14 The Initial Setup menu
Using the Initial Setup menu 116
Selecting other languages for language options 128

15 Additional information
Minimum copying times 129
Manual recording modes 130
Troubleshooting 131
On-screen displays and recorder displays 135
Language code list 137
Country/Area code list 138
Screen sizes and disc formats 139
Handling discs 140
Cleaning the pickup lens 140
Condensation 141
Hints on installation 141
Moving the recorder 141
Resetting the recorder 141
Specifications 142

Chapter 1
Before you start

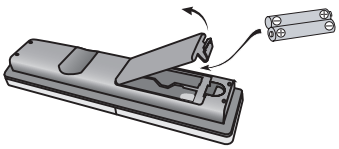
What's in the box

Please confirm that the following accessories are in the box when you open it.

- Remote control
- AA/R6P dry cell batteries x 2
- Audio/video cable (red/white/yellow)
- G-LINK™ cable
- RF antenna cable
- Power cable
- These operating instructions
- Warranty card

Putting the batteries in the remote control

1 Insert two AA/R6P batteries into the battery compartment following the indications (⊕,⊖) inside the compartment.



Important

Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

- Don't mix new and old batteries together.
- Don't use different kinds of batteries together—although they may look similar, different batteries may have different voltages.
- Make sure that the plus and minus ends of each battery match the indications in the battery compartment.
- Remove batteries from equipment that isn't going to be used for a month or more.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.

WARNING

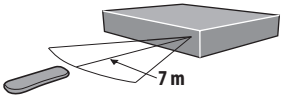
Do not use or store batteries in direct sunlight or other excessively hot place, such as inside a car or near a heater. This can cause batteries to leak, overheat, explode or catch fire. It can also reduce the life or performance of batteries. **D3-4-2-3-3_En**

Using the remote control

Please keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote and the remote sensor on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the unit's remote sensor.
- Remote controllers for different devices can interfere with each other. Avoid using remotes for other equipment located close to this unit.

- Replace the batteries when you notice a fall off in the operating range of the remote.
- When the batteries run down or you change the batteries, the remote control mode is reset to Recorder 1. See *Remote Control Mode* on page 126.
- Use within the operating range in front of the remote control sensor on the front panel, as shown.



- You can control this recorder using the remote sensor of another Pioneer component using the **CONTROL IN** jack on the rear panel. See *Rear panel connections* on page 14 for more information.

Disc / content format playback compatibility

Compatible media

- DVD-RW ver. 1.1 / 1 x / 1 x to 2 x, ver. 1.2 / 2 x to 4 x / 2 x to 6 x
- DVD-R ver. 2.0 /1 x / 1 x to 4 x / 1 x to 8 x / 1 x to 16 x, ver. 2.1 / 1 x to 8 x / 1 x to 16 x
- DVD+RW 1 x to 2.4 x / 1 x to 4 x / 3.3 x to 8 x
- DVD+R 1 x to 2.4 x / 1 x to 4 x / 1 x to 8 x / 1 x to 16 x
- DVD-RAM ver. 2.0 / 2 x, ver. 2.1 / 2 x / 2 x to 3 x / 2 x to 5 x, ver. 2.2 / 2 x / 2 x to 3 x / 2 x to 5 x
- DVD-R DL ver. 3.0 / 2 x to 4 x
- DVD+R DL 2.4 x / 2.4 x to 8 x

Note that older models of DVD recorders and DVD writers may reject DVD-RW ver. 1.2 discs and/or corrupt the data on the disc. If you want to share DVD-RW discs between this recorder and an older recorder/writer, we recommend using ver. 1.1 discs.

The following table shows older Pioneer DVD recorders' limited compatibility with DVD-RW ver. 1.2 discs.

Model	Playable	Recordable
DVR-7000	Yes[1,2,3]	No
DVR-3100 / DVR-5100H	Yes[1]	No

[1] Discs should be finalized in this recorder before playing. Unfinalized VR mode and Video mode discs may not play.

[2] **Cannot read the CPRM information** *will show in the display when you load a disc. However, this will not affect playback.*

[3] Copy-once protected disc titles will not play.

DVD/HDD Recording and playback compatibility

This recorder can play and record all the currently popular DVD disc types, as well as providing HDD functionality. The table below shows some specific compatibility differences between the different disc types.

	HDD	DVD-R		DVD-RW		DVD+R	DVD +RW	DVD-RAM
Marks used in this manual	HDD	DVD (VR) *1	DVD (Video)	DVD (VR) *1	DVD (Video) *2	DVD+R	DVD+RW	DVD-RAM *13, 16
Logos	HDD HARD DISK DRIVE	DVD R		DVD RW	DVD RW RW 2	RW DVD+R	RW DVD+ReWritable RW DVD+ReWritable High Speed	DVD RAM
Re-recordable / Erasable	●	*3	*3	●	●	*3	● *14	●
Editing of recorded programs	●	●	● *4	●	● *4	● *4	● *4	●
Recording of Copy-once protected material	●	● *12		● *12				● *12
Playback in other players/recorders	*n/a*	*5	● *6	*7	● *6	● *6, 15	● *8	● *9
Chase play	●							
16:9 and 4:3 program recording	●	●		●				●
Bilingual broadcast recording of both audio channels	● *10, 11	● *11		● *11				● *11

Notes to table

**1 Must be initialized for VR mode recording (page 110)*
**2 Must be initialized for Video mode recording (page 110)*
**3 Erasable, but free space does not increase*
**4 Cannot erase sections, edit chapters or use playlist editing*
**5 Must be compatible with DVD-R(VR) playback*
**6 Finalize using this recorder (may not playback in some units) (page 64)*
**7 Must be compatible with DVD-RW(VR) playback*
**8 Must be compatible with DVD+RW playback*
**9 Must be compatible with DVD-RAM playback*
**10 Only when HDD Recording Format is set to Video Mode Off (page 124)*
**11 Only when the recording mode is not set to LPCM*
**12 CPRM-compatible discs only*
**13 Take the disc out of the cartridge before use. Only Matsushita and Maxell discs have been tested to work reliably with this recorder. Discs from other makers may become unusable when recorded or edited.*
**14 Erasing a title does not increase the available recording time, nor increase the number of recordable titles left.*
**15 Must be compatible with DVD+R playback*
**16 Depending on the disc, it may have to be initialized before it can be recorded (page 110). In this case, initialization will take about 1 hour.*

DVD is a trademark of DVD Format/Logo Licensing Corporation.

Using DVD-R DL/DVD+R DL discs

DVD-R DL (dual-layer) and DVD+R DL (double-layer) discs contain two recordable layers on a single side, giving about 1.8 times the recording capacity of a conventional single-layer disc. This unit can record to both DVD-R DL and DVD+R DL discs.

- If you intend to play DVD-R DL (Video mode) or DVD+R DL discs recorded on this unit on other DVD recorders/players, you must finalize them. (Note that some DVD recorders/players may not play even finalized DL discs.)
- Please read the information provided on the disc packaging carefully before purchasing DVD-R DL/DVDw+R DL discs:
- *Confirm the disc version:* Use ver. 3.0 / 2 x to 4 x DVD-R discs.
- *Confirm the recording speed:* DVD-R should be compatible with 2 x or 4 x recording; DVD+R with 2.4 x to 8 x recording.
- This logo indicates that the disc is a DVD-R DL or DVD+R DL disc:

- Correct operation has been confirmed for DVD-R DL discs (Ver. 3.0 / 2 x, 4 x) produced by the following manufacturers: Mitsubishi Kagaku Media, Verbatim (as of March 2005).

About DualDisc playback

A DualDisc is a new two-sided disc, one side of which contains DVD content –video, audio, etc. –while the other side contains non-DVD content such as digital audio material.

The non-DVD, audio side of the disc is not compliant with the CD Audio specification and therefore may not play.

It is possible that when loading or ejecting a DualDisc, the opposite side to that being played will be scratched. Scratched discs may not be playable.

The DVD side of a DualDisc plays in this product. DVD-Audio content will not play.

For more detailed information on the DualDisc specification, please refer to the disc manufacturer or disc retailer.

Other disc compatibility

In addition to DVD, this recorder is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD (and DVD), may be in an unplayable format—see below for further compatibility information.

CD-R/RW compatibility

This recorder cannot record CD-R or CD-RW discs.

- Readable formats: CD-Audio, Video CD/ Super VCD, ISO 9660 CD-ROM* containing MP3, WMA, JPEG or DivX files.
  ** ISO 9660 Level 1 or 2 compliant. CD physical format: Mode1, Mode2 XA Form1. Romeo and Joliet file systems are both compatible with this recorder.*

- Multi-session playback: Yes (except CD-Audio and Video CD/Super VCD)
- Unfinalized disc playback: CD-Audio only

Compressed audio compatibility

- Compatible media: CD-ROM, CD-R, CD-RW
- Compatible formats: MPEG-1 Audio Layer 3 (MP3), Windows Media Audio (WMA)
- Sampling rates: 32 kHz, 44.1 kHz or 48 kHz
- Bit-rates: Any (128 Kbps or higher recommended)
- Variable bit-rate (VBR) MP3 playback: Yes
- VBR WMA playback: No
- WMA encoder compatibility: Windows Media Codec 8 *(files encoded using Windows Media Codec 9 may be playable but some parts of the specification are not supported; specifically, Pro, Lossless, Voice and VBR)*
- DRM (Digital Rights Management)[1] file playback: No
- File extensions: .mp3, .wma (these must be used for the recorder to recognize MP3 and WMA files – do not use for other file types)
- File structure: Up to 99 folders / 999 files (if these limits are exceeded, only files and folders up to these limits are playable)

WMA (Windows Media Audio) compatibility

The Windows Media® logo printed on the box indicates that this recorder can playback Windows Media Audio content.

WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA content can be encoded by using Windows Media® Player for Windows® XP, Windows Media® Player 9 or Windows Media® Player 10 series.

Microsoft, Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

DivX video compatibility

DivX is a compressed digital video format created by the DivX® video codec from DivX, Inc. This recorder can play DivX video files burned on CD-R/RW/ROM discs. Keeping the same terminology as DVD-Video, individual DivX video files are called "Titles." When naming files/titles on a CD-R/RW disc prior to burning, keep in mind that by default they will be played in alphabetical order.

Note

1 DRM (digital rights management) copy protection is a technology designed to prevent unauthorized copying by restricting playback, etc. of compressed audio files on devices other the PC (or other recording equipment) used to record it. For detailed information, please see the instruction manuals or help files that came with your PC (or other WMA recording equipment) and/or software.

- Official DivX® Certified product.
- Plays all versions of DivX® video (including DivX® 6) with standard playback of DivX® media files.
- File extensions: .avi and .divx (these must be used for the recorder to recognize DivX video files). *Note that all files with the .avi extension are recognized as MPEG4, but not all of these are necessarily DivX video files and therefore may not be playable on this recorder.*
- File structure: Up to 99 folders or 999 files.

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

DivX® VOD content

In order to play DivX VOD (video on demand) content on this recorder, you first need to register the recorder with your DivX VOD content provider. You do this by generating a DivX VOD registration code, which you submit to your provider.

Some DivX VOD content may only be playable a fixed number of times. When you load a disc containing this type of DivX VOD content, the remaining number of plays is shown on-screen and you then have the option of playing the disc (thereby using up one of the remaining plays), or stopping. If you load a disc that contains expired DivX VOD content (for example, content that has zero remaining plays), the message **Rental Expired** is displayed.

If your DivX VOD content allows an unlimited number of plays, then you may load the disc into your recorder and play the content as often as you like, and no message will be displayed.

Important

- DivX VOD content is protected by a DRM (Digital Rights Management) system. This restricts playback of content to specific, registered devices.
- If you load a disc that contains DivX VOD content not authorized for this recorder, the message **Authorization Error** is displayed and the content will not play.
- Resetting the recorder (as described in *Resetting the recorder* on page 141) will not cause you to lose your registration code.

JPEG file compatibility

- Compatible formats: Baseline JPEG and EXIF 2.2* still image files
  **File format used by digital still cameras*
- Sampling ratio: 4:4:4, 4:2:2, 4:2:0
- Horizontal resolution: 160 to 5120 pixels
- Vertical resolution: 120 to 3840 pixels
- Progressive JPEG compatible: No
- File extensions: .jpg, .jpeg, .jpe, .jif, .jfif (must be used for the recorder to recognize JPEG files – do not use for other file types)
- File structure: The recorder can load up to 99 folders / 999 files at one time *(if there are more files/folders that this on the disc then more can be reloaded)*

PC-created disc compatibility

Discs recorded using a personal computer may not be playable in this unit due to the setting of the application software used to create the disc. In these particular instances, check with the software publisher for more detailed information.

Discs recorded in packet write mode (UDF format) are not compatible with this recorder.

Check the DVD-R/RW or CD-R/RW software disc boxes for additional compatibility information.

Dolby Digital

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

DTS

"DTS" and "DTS Digital Out" are registered trademarks of Digital Theater Systems, Inc.

About the internal hard disk drive

The internal hard disk drive (HDD) is a fragile piece of equipment. Depending on the conditions under which it is used, or through careless use, it is possible that the recorded contents will be damaged or lost completely, or that normal playback and recording will not be possible. Please understand that in the event of repair or replacement of the HDD or related components, all your HDD recordings will be lost.

Please use the recorder following the guidelines below to protect against possible HDD failure.

The HDD should not be regarded as a place to store recordings permanently. We recommend that you back up your important recordings onto DVD discs in order to protect against accidental loss.

Pioneer cannot under any circumstances accept responsibility for any direct or indirect loss arising from any inconvenience or loss of recorded material resulting from HDD failure.

- Do not move the recorder while it is on (this includes during EPG download when the display shows **EPG**).
- Install and use the recorder on a stable, level surface.
- Do not block the rear vent/cooling fan.
- Do not use the recorder in excessively hot or humid places, or in places that may be subject to sudden changes in temperature. Sudden changes in temperature can cause condensation to form inside the recorder. This can be a cause of HDD failure.
- While the recorder is switched on (including during EPG download when the display shows **EPG**), do not unplug from the wall socket or switch the electricity off from the breaker switch.
- Do not move the recorder immediately after switching it off. If you need to move the recorder, please follow the steps below:

1 After the message **POWER OFF** is shown in the display, wait at least two minutes.

2 Unplug from the wall socket.

3 Move the recorder.

- If there's a power failure while the recorder is on there is a chance that some data on the HDD will be lost.
- The HDD is very delicate. If used improperly or in an unsuitable environment, it is possible that the HDD will fail after a few years of use. Signs of problems include playback unexpectedly freezing and noticeable block noise (mosaic) in the picture. However, sometimes there will be no warning signs of HDD failure. If the HDD fails, no playback of recorded material will be possible. In this case it will be necessary to replace the HDD unit.

Optimizing HDD performance

As you record and edit material on the HDD, the data on the disk becomes fragmented, eventually affecting the recorder's performance. Before this happens, the recorder will warn you that it is time to optimize the HDD (which you can do from the Disc Setup menu; see *Optimize HDD* on page 111).

Symbols used in this manual

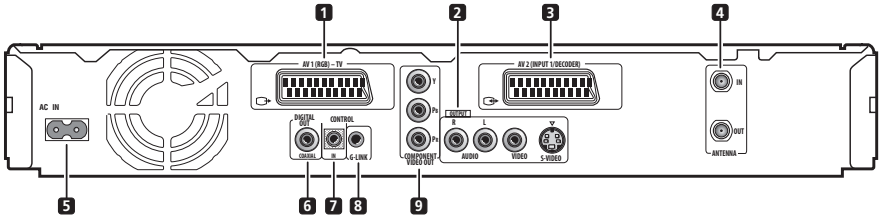
The following icons are provided to help you quickly identify which instructions you need for which kind of disc.

HDD	HDD
DVD	Any type of DVD disc (recordable or playback only), finalized or not.
DVD-Video	Commercially produced DVD, finalized Video mode DVD-R/-RW.
DVD (Video)	Video mode DVD-R/-RW (unfinalized)
DVD (VR)	VR mode DVD-R/-RW
DVD+R	DVD+R
DVD+RW	DVD+RW
DVD-RAM	DVD-RAM
CD	Audio CD
Video CD	Video CD
Super VCD	Super VCD
WMA/MP3	WMA or MP3 files
DivX	DivX files
ALL	All of the above

+6Chapter 2

Connecting up

Rear panel connections



1 AV1(RGB)-TV AV connector
Audio/video output SCART-type AV connector for connecting to a TV or other equipment with a SCART connector. The video output is switchable between video, S-video and RGB. See page *AV1 Out* on page 119 for how to set this up.

2 OUTPUT
Stereo analog audio, video and S-video outputs for connection to a TV or AV amplifier/receiver.

3 AV2(INPUT 1/DECODER) AV connector
Audio/video input/output SCART-type AV connector for connecting to a VCR, or other equipment with a SCART connector. The input accepts video, S-video and RGB. See *AV2/L1 In* on page 119 for how to set this up.

4 ANTENNA IN (RF IN)/OUT
Connect your TV antenna to the **ANTENNA IN (RF IN)** jack. The signal is passed through to the **ANTENNA OUT** jack for connection to your TV.

5 AC IN – Power inlet

6 DIGITAL AUDIO OUT
Coaxial digital audio jack for connecting to an AV amplifier/receiver, Dolby Digital/DTS/MPEG decoder or other equipment with a digital input.

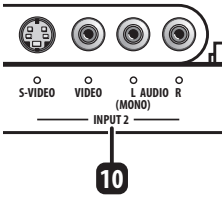
7 CONTROL IN
Use to control this recorder from the remote sensor of another Pioneer component with a **CONTROL OUT** terminal and bearing the Pioneer mark. Connect the **CONTROL OUT** of the other component to the **CONTROL IN** of this recorder using a mini-plug cord.

8 G-LINK™
Use to connect the supplied G-LINK™ cable to enable GUIDE Plus+® to control an external satellite receiver, etc.

9 COMPONENT VIDEO OUT
A high-quality video output for connecting to a TV or monitor with a component video input.

Front panel connections

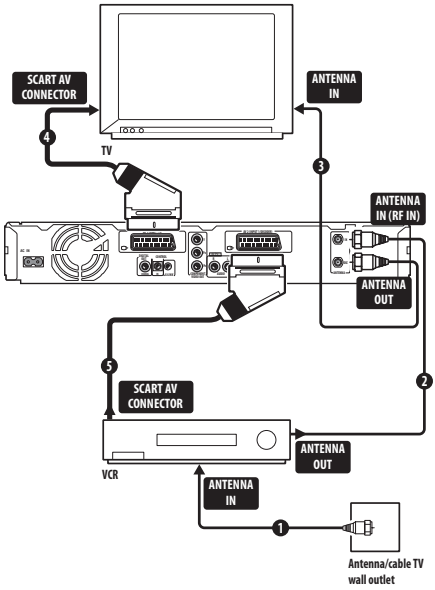
On the front panel a flip-down cover hides more connections.



10 INPUT 2
Audio/video input (stereo analog audio; composite and S-video video), especially suitable for camcorders, game consoles, portable audio, etc.

Easy connections

The setup described below is a basic setup that allows you to watch and record TV programs, and play discs. Other types of connections are explained starting on the following page.



Important

- These connections use SCART cables (not supplied). If your TV (or VCR) does not have a SCART connection, see the following page for connecting up using the supplied audio/video cable.
- The **AV1(RGB)-TV** AV connector can output ordinary (composite), S-video or RGB video, plus stereo analog audio. The **AV2(INPUT 1/DECODER)** connector accepts ordinary, S-video and RGB video input, as well as stereo analog audio. See *AV1 Out* on page 119 and *AV2/L1 In* on page 119 for how to set them up.
- Before making or changing any rear panel connections, make sure that all components are switched off and unplugged from the wall outlet.

1 Connect the cable from the antenna/ cable TV outlet to the antenna input on your VCR.

- If you are not connecting a VCR in the chain, connect it to the **ANTENNA IN (RF IN)** jack on this recorder and skip the next step.

2 Use an RF antenna cable (one is supplied) to connect the antenna output of your VCR to the ANTENNA IN (RF IN) of this recorder.

3 Use another RF antenna cable to connect the ANTENNA OUT of this recorder to the antenna input on your TV.

4 Use a SCART cable (not supplied) to connect the AV1(RGB)-TV AV connector on this recorder to the SCART AV connector on your TV.

5 Use another SCART cable to connect the AV2(INPUT 1/DECODER) AV connector to a SCART AV connector on your VCR.

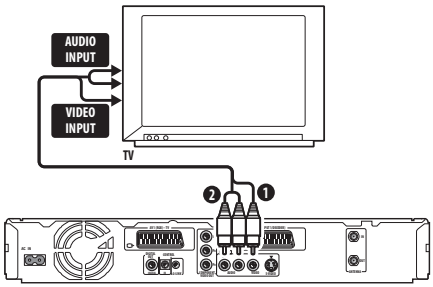
Tip

- This recorder has a 'through' function which allows you to record a TV program from the built-in TV tuner in this recorder while watching a video playing on your VCR. (To use this feature when the recorder is in standby, **Power Save** must be set to **Off**—see *Power Save* on page 116).

Using other types of audio/ video output

If you can't use the SCART AV connector to connect your TV to this recorder, there are standard audio/video output jacks, as well as an S-video and component video output.

Using the supplied audio/video cable



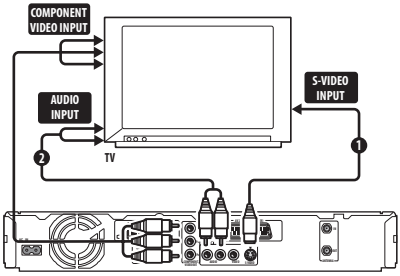
1 Connect the VIDEO OUTPUT jack to a video input on your TV.

Use the yellow jack of the supplied audio/ video cable for the video connection.

2 Connect the AUDIO OUTPUT jacks to the corresponding audio inputs on your TV.

Use the red and white jacks of the supplied audio/video cable for the audio connection. Make sure you match up the left and right outputs with their corresponding inputs for correct stereo sound.

Using the S-video or component video output



1 Connect the S-video or component video output to a similar input on your TV.

For an S-video connection, use an S-video cable (not supplied) to connect the **S-VIDEO OUTPUT** jack to an S-video input on your TV.

For a component video connection, use a component video cable (not supplied) to connect the **COMPONENT VIDEO OUT** jacks to a component video input on your TV.

See also *Component Video Out* on page 119 for how to set up the component video output for use with a progressive scan-compatible TV.

2 Connect the AUDIO OUTPUT jacks to the corresponding audio inputs on your TV.

You can use the supplied audio/video cable, leaving the yellow video plug disconnected. Make sure you match up the left and right outputs with their corresponding inputs for correct stereo sound.

Connecting to a cable box, satellite receiver or digital terrestrial receiver

If you have a cable, satellite or digital terrestrial receiver with a built-in decoder, connect it to this recorder and your TV as shown on the following page.[1] If you are using a separate decoder box for your cable/satellite TV, set up following the instructions on the next page.

Using the setup on this page you can:

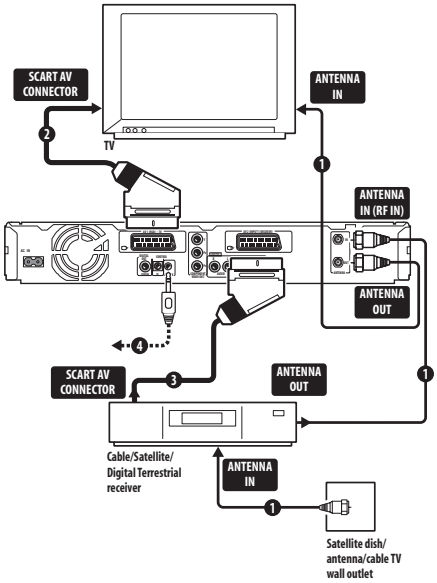
- Record any channel by selecting it on the cable box, satellite receiver or digital terrestrial receiver.
- Change channels and set timer recordings on the external receiver using the GUIDE Plus+® system (via the G-LINK™ cable, and after setting up).

Important

- Do not connect this recorder to your TV 'through' your VCR, satellite receiver or other component. Always connect each component directly to your TV or AV amplifier/receiver.
- When using the GUIDE Plus+ system to make a timer recording from an external receiver, make sure that the external receiver is switched on.

Note

1 The diagram shows SCART video connections, but you can alternatively use any of the other audio/video connections.



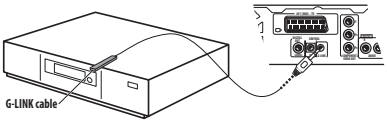
1 Connect RF antenna cables as shown.
This enables you to watch and record TV channels.

2 Use a SCART cable (not supplied) to connect the AV1(RGB)-TV AV connector to a SCART AV connector on your TV.
This enables you to watch discs.

3 Use another SCART cable to connect the AV2(INPUT 1/DECODER) AV connector to a SCART AV connector on your cable box/satellite/digital terrestrial receiver.
This enables you to record scrambled TV channels.

4 Plug the supplied G-LINK™ cable to the G-LINK™ jack.
This enables you to control the tuner in the external receiver using the GUIDE Plus+® system.

Position the IR transmitter end of the G-LINK™ cable so that the IR receiver on your cable/satellite/digital terrestrial receiver will pick up the control signals (see diagram).



See the manual that came with your cable/satellite/digital terrestrial receiver if you're not sure where the IR receiver is on the front panel. Alternatively, experiment with the remote control, operating it from very close range until you find the place where the receiver responds.

Tip

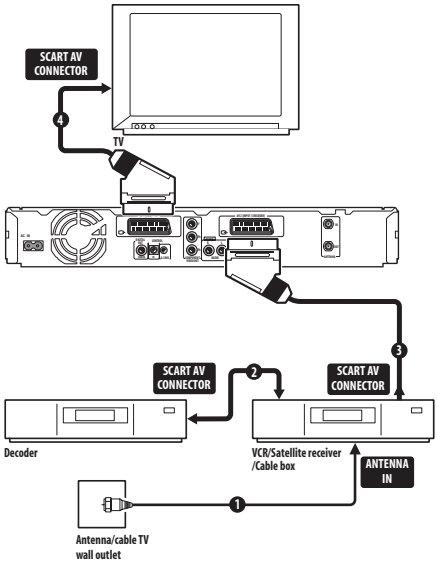
- This recorder has a 'through' function which allows you to record a TV program from the built-in TV tuner in this recorder while watching a video playing on your VCR. (To use this feature when the recorder is in standby, **Power Save** must be set to **Off**—see *Power Save* on page 116).

Connecting an external decoder box (1)

If you have an external, dedicated decoder box for your satellite or cable TV system, use the setup described on this page. See the previous page for how to connect the G-LINK™ cable.

Important

- Do not connect your decoder box directly to this recorder.
- Information from the decoder (for example, relating to pay TV services), is only viewable when this recorder is off (in standby).
- For timer recording to work properly on this recorder, the VCR/satellite receiver/ cable box must also be switched on during recording.
- It is not possible to watch one TV program and record another using this setup.



1 Connect the cable from the antenna/ cable TV outlet to the antenna input on your VCR/satellite receiver/cable box.

2 Use a SCART cable (not supplied) to connect your decoder to your VCR/ satellite receiver/cable box.
See the manual for your decoder box for more detailed instructions.

3 Use a SCART cable to connect your VCR/satellite receiver/cable box to the AV2(INPUT 1/DECODER) AV connector on this recorder.

4 Use a SCART cable to connect the AV1(RGB)-TV AV connector to your TV.

Connecting an external decoder box (2)

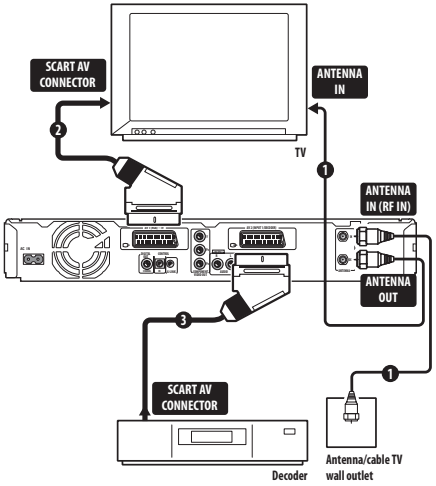
If you only have a decoder, connect it to this recorder and your TV as shown on this page.[1]

Using the setup on this page you can:

- Record scrambled channels received using the recorder's built-in TV tuner.

Important

- Do not connect this recorder 'through' your VCR, satellite receiver or cable box. Always connect each component directly to your TV or AV amplifier/ receiver.



1 Connect RF antenna cables as shown.
This enables you to watch and record TV channels.

2 Use a SCART cable (not supplied) to connect the AV1(RGB)-TV AV connector to a SCART AV connector on your TV.
This enables you to watch discs.

3 Use another SCART cable to connect the AV2(INPUT 1/DECODER) AV connector to a SCART AV connector on your decoder box.
This enables you to record scrambled TV channels.

Note

1 In order to use this setup, you will need to make the following settings from the Initial Setup menu:
- Set the **AV2/L1 In** setting to **Decoder** from the Initial Setup menu (see *AV2/L1 In* on page 119).
- From the **Manual CH Setting** screen, set the **Decoder** setting for the scrambled channels to **On** (see *Manual CH Setting* on page 118).

Connecting to an AV amplifier/receiver

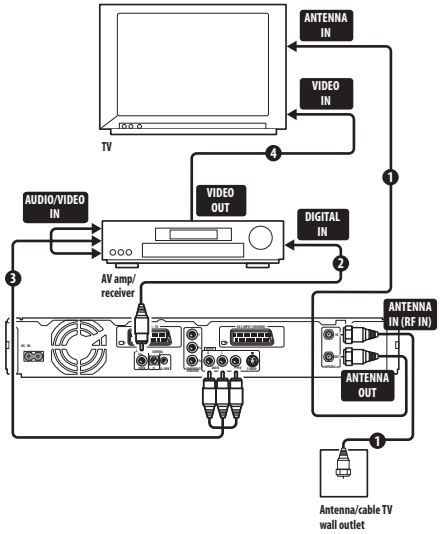
To enjoy multichannel surround sound you need to connect this recorder to an AV amplifier/receiver using the digital coaxial output.

In addition to a digital connection, we recommend also connecting using the stereo analog connection for compatibility with all discs and sources.

You'll probably also want to connect a video output to your AV amplifier/receiver. Use the ordinary video output (as shown here), or the S-video output.

Important

- Noise may be output from your speakers if the recorder is not set up to work with your AV amplifier/receiver properly (see *Audio Out* on page 120).
- Do not connect this recorder to your TV 'through' your VCR using A/V cables. Always connect it directly to your TV.



1 Connect RF antenna cables as shown.
This enables you to watch and record TV channels.

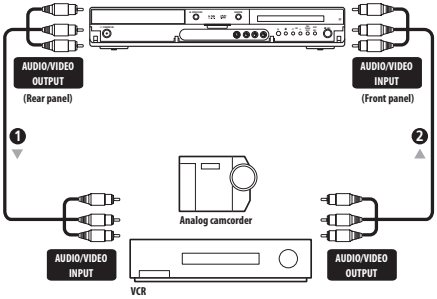
2 Connect one of the DIGITAL OUT COAXIAL jack on this recorder to an coaxial digital input on your AV amplifier/receiver.
This enables you to listen to multichannel surround sound.

3 Connect the analog AUDIO OUTPUT and VIDEO OUTPUT jacks on this recorder to an analog audio and video input on your AV amplifier/receiver.

4 Connect the AV amplifier/receiver's video output to a video input on your TV.

Connecting other AV sources

Connecting a VCR or analog camcorder



1 Connect a set of audio and video inputs of your VCR or camcorder to a set of outputs on this recorder.
This enables you to record from this recorder to your VCR or camcorder.

- You can use standard video or S-video cables for the video connection.
- Alternatively, you can use the **AV2(INPUT 1/DECODER)** SCART connector for audio/video input and output with just one SCART cable.

2 Connect a set of audio and video outputs of your VCR or camcorder to a set of inputs on this recorder.
This enables you to record tapes from your VCR or camcorder.

- You can use standard video or S-video cables for the video connection.
- The front panel connections make convenient connections for a camcorder input.

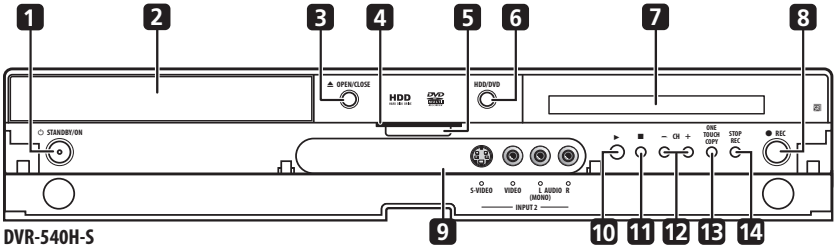
Plugging in

After checking all the connections, plug in the recorder.

1 Use the supplied power cable to connect this recorder to a power outlet.

Chapter 3
Controls and displays

Front panel



DVR-540H-S

1 ⏻ STANDBY/ON
Press to switch the recorder on/into standby.

2 Disc tray

3 ⏏ OPEN/CLOSE
Press to open/close the disc tray.

4 HDD / DVD indicators
Indicator lights blue when the hard disk (HDD) is selected; orange when the DVD drive is selected.

5 PAUSE LIVE TV (page 58)
Press to start recording the current TV channel, but with playback paused, effectively pausing the broadcast.

6 HDD/DVD
Press to switch between HDD and DVD for recording and playback.

7 Front panel display and IR remote sensor
See *Display* on page 25 for details.

8 ● REC
Press to start recording. Press repeatedly to set the recording time in 30 minute blocks.

9 Front panel inputs
See *Front panel connections* on page 15 for more information on these.

10 ►
Press to start or restart playback.

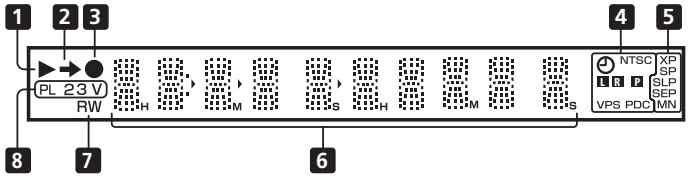
11 ■
Press to stop playback.

12 CH +/–
Use to change channels, skip chapters/tracks, etc.

13 ONE TOUCH COPY (page 95)
Press to start One Touch Copy of the currently playing title to DVD or the HDD.

14 STOP REC
Press to stop recording.

Display



1 ▶
Lights during playback; blinks when playback is paused.

2 ➡
Lights when copying.

3 ●
Lights during recording; blinks when recording is paused.

4 (page 59)
Lights when a timer recording has been set. (Indicator blinks if the timer has been set to DVD but there isn't a recordable disc loaded, or the timer has been set to HDD but the HDD is not recordable.)

NTSC
Lights when the video output signal format is NTSC.

L R (page 120)
Indicates which channels of a bilingual broadcast are recorded.

P (page 119)
Lights when the component video output is set to progressive scan.

VPS / PDC (page 59)
Lights when receiving a VPS/PDC broadcast during a VPS/PDC-enabled timer recording.

5 **Recording quality indicators** (page 56)

XP
Lights when the recording mode is set to **XP** (best quality).

SP
Lights when the recording mode is set to **SP** (standard play).

LP / SLP
Lights when the recording mode is set to **LP** (long play) or **SLP** (super-long play).

EP / SEP
Lights when the recording mode is set to **EP** (extended play) or **SEP** (super-extended play).

MN
Lights when the recording mode is set to **MN** (manual recording level) mode.

6 **Character display**

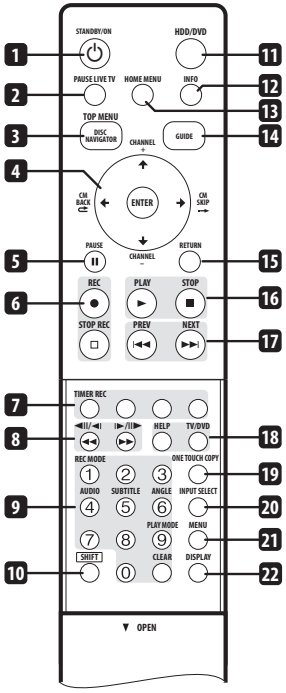
7 **R / RW**
Lights when a recordable DVD-R or DVD-RW disc is loaded.

8 **PL** (page 82)
Lights when a VR mode disc is loaded and the recorder is in Play List mode.

2 3 (page 126)
Shows the remote control mode (if nothing is displayed, the remote control mode is 1).

V
Lights when an unfinalized Video mode disc is loaded.

Remote control



1 ⏻ STANDBY/ON
Press to switch the recorder on/into standby.

2 PAUSE LIVE TV (page 58)
Press to start recording the current TV channel, but with playback paused, effectively pausing the broadcast.

3 DISC NAVIGATOR (page 72, 81) **/ TOP MENU** (page 68)
Press to display the Disc Navigator screen, or the top menu if a DVD-Video or finalized DVD-R/RW (Video) disc is loaded.

4 ↑/↓/←/→ and ENTER
Used to navigate all on-screen displays. Press **ENTER** to select the currently highlighted option.

CM BACK (commercial back)
Press repeatedly to skip progressively backward through the audio or video playing.

CM SKIP (commercial skip)
Press repeatedly to skip progressively forward through the audio or video playing.

CHANNEL +/– (page 55)
Press to change the channel of the built-in TV tuner.

5 ❚❚ PAUSE
Press to pause playback or recording.

6 Recording controls (page 57)

● REC
Press to start recording. Press repeatedly to set the recording time in blocks of 30 mins.

When the red action button is visible in a GUIDE Plus+® screen, use for One-Button-Record.

STOP REC
Press to stop recording.

7 GUIDE Plus+® Action buttons
When in the GUIDE Plus+® system, these buttons act as the Red, Green, Yellow and Blue Action buttons (the functions of these buttons change according to the GUIDE Plus+® Area. (page 37)

TIMER REC (page 37)
Hold **SHIFT** and press to set a timer recording from the GUIDE Plus+® system.

8 ◄◄ ►► (page 73)
Press to start reverse or forward scanning. Press again to change the speed.

◄II/◄I I►/II► (page 74)
While paused, press and hold to start slow-motion playback. Press repeatedly to change the playback speed.

While paused, press to advance a single frame in either direction.

When GUIDE Plus+® is displayed, use to display the previous/next day.

9 Number buttons, CLEAR
Use the number buttons for track/chapter/title selection; channel selection, and so on. The same buttons can also be used to enter names for titles, discs and so on.

Use **CLEAR** to clear an entry and start again.

REC MODE (page 56)
Hold **SHIFT** and press repeatedly to change the recording mode (picture quality).

AUDIO (page 55, 78)
Hold **SHIFT** and press to change the audio language or channel. (When the recorder is stopped, press to change the tuner audio.)

SUBTITLE (page 77)
Hold **SHIFT** and press to display/change the subtitles included in multilingual DVD-Video discs.

ANGLE (page 79)
Hold **SHIFT** and press to switch camera angles on discs with multi-angle scenes.

PLAY MODE (page 74)
Hold **SHIFT** and press to change the play mode (search, repeat, program play, etc.)

10 SHIFT
Use to access functions on the remote printed in green.

11 HDD/DVD (page 57)
Press to select the hard disk (HDD) or DVD for recording and playback.

12 INFO
Press to see additional information for the highlighted item in GUIDE Plus+®.

13 HOME MENU
Press to display the Home Menu, from which you can navigate all the functions of the recorder.

14 GUIDE
Press to display the GUIDE Plus+® screen; press again to exit.

15 RETURN
Press to go back one level in the on-screen menu or display.

16 ► PLAY (page 67)
Press to start playback.

■ STOP (page 67)
Press to stop playback.

17 ⏮ ⏭
Press to skip to the previous or next title/chapter/track/folder; or to display the previous or next menu page.

When GUIDE Plus+® is displayed, use to display the previous/next page.

18 HELP
Press for help on how to use the current GUI screen.

TV/DVD
Press to switch between 'TV mode', in which you get the picture and sound from the TV's tuner, and 'DVD mode', in which you get picture and sound from the recorder's tuner (or an external input).

19 ONE TOUCH COPY (page 95)
Press to start One Touch Copy of the currently playing title to DVD or the HDD.

20 INPUT SELECT (page 63)
Press to change the input to use for recording.

21 MENU (page 68)
Press to display the disc menu if a DVD-Video, finalized DVD-R/-RW or finalized DVD+R/+RW disc is loaded.

When in the GUIDE Plus+® system, use to jump directly to the Menu bar.

22 DISPLAY (page 79)
Displays/changes the on-screen information displays.

Chapter 4
Getting started

Switching on and setting up

When you switch the recorder on for the first time, you can make several basic settings using the Setup Navigator feature. This takes you through setting the clock, the internal TV tuner and the video output.

If you're using the recorder for the first time, we strongly recommend you use the Setup Navigator before starting to use the recorder.

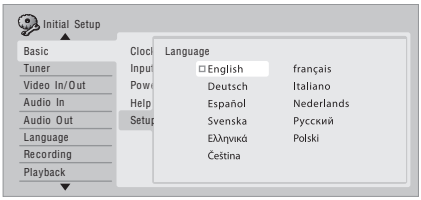
1 Switch on your TV and set the video input to this recorder.

2 STANDBY/ON **Switch on the recorder.**

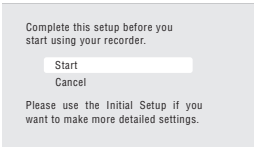
When you switch on for the first time, your TV should display the Setup Navigator screen (If the Setup Navigator doesn't appear, you can also access it from the Initial Setup menu; see page 116).

- If this recorder is connected to a compatible TV using a fully-wired 21-pin SCART cable, the recorder will take a few seconds to download country, TV screen size and language information. (Check the manual that came with your TV for compatibility information.)

3 ENTER **Choose a language (then press ENTER).**

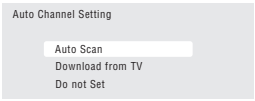


4 ENTER **Start the Setup Navigator.**


Complete this setup before you start using your recorder.
Start
Cancel
Please use the Initial Setup if you want to make more detailed settings.

- If you don't want to use the Setup Navigator, press ↓ to select **Cancel**, then press **ENTER** to exit the Setup Navigator.

5 ENTER **Select the Auto Channel Setting ('Auto Scan' or 'Download from TV'), or 'Do not set'.**

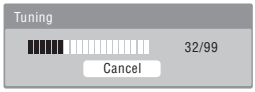


- Select **Do not set** if you want to skip channel setup (because they have already been set up, for example).
- You can only use the **Download from TV** feature if this recorder is connected to your TV using a fully-wired 21-pin SCART cable via the **AV1(RGB)-TV** connector, and if your TV supports this function (check your TV's instruction manual for more details).

- **Select your country.**

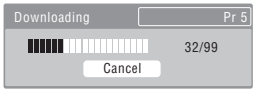
- **Auto-tuning channels**

The **Auto Scan** option automatically scans and sets the channel presets.



- **Downloading channels from your TV**

Use the **Download from TV** option to download all the channels that your TV is tuned to.

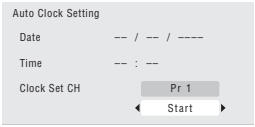


6 **Select 'Auto' for automatic time setting, or 'Manual' to set the clock manually.**

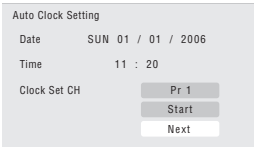
- **Auto clock setting**

Some TV channels broadcast time signals together with the program. This recorder can use these signals to set the clock automatically.

Set 'Clock Set CH' to the channel preset number that broadcasts a time signal, then move the cursor down to 'Start' and press ENTER.



The recorder takes a short while to set the time. After you see that it's set, select **Next** to proceed.



If the time could not be set automatically, press **RETURN** to go back to the previous screen and select **Manual**.

- **Manual clock setting**

If no stations in your area are broadcasting time signals, you can set the clock manually.

Use the ⬅/➡ buttons to set your time zone.

You can set this by selecting a city or a time relative to GMT.

Press ⬇ then use the ⬅/➡ buttons to select 'On' or 'Off' for summer time, then press ENTER.
Select **On** if you are currently using summer time.

Set the date (day/month/year) and time, then press ENTER to make all the settings.

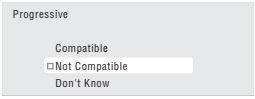
Use the ⬆/⬇ buttons to change the value in the highlighted field.

Use the ⬅/➡ buttons to move from one field to another.

- You can go back to the previous screen at anytime in the Setup Navigator by pressing **RETURN**.

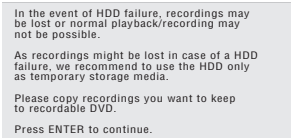
7 Select the TV screen type, 'Wide (16:9)' or 'Standard (4:3)'.

8 Select whether or not your TV is compatible with progressive scan video.

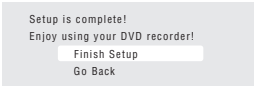


- Note that progressive scan video is only output through the **AV1(RGB)-TV** connector and the component video outputs.

9 Press to continue after reading the HDD caution.


In the event of HDD failure, recordings may be lost or normal playback/recording may not be possible.
As recordings might be lost in case of a HDD failure, we recommend to use the HDD only as temporary storage media.
Please copy recordings you want to keep to recordable DVD.
Press ENTER to continue.

10 Select 'Finish Setup' to exit the Setup Navigator, or 'Go Back' if you want to start again.



That completes basic setup using the Setup Navigator.

- If there are blank channels with no station, you can set these to skip using the manual channel setting. See *Manual CH Setting* on page 118.

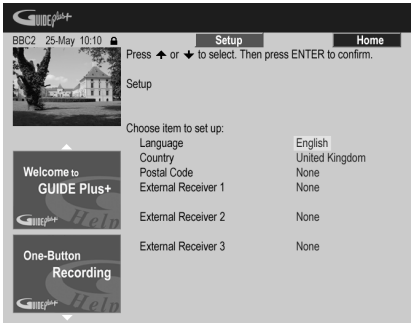
Setting up the GUIDE Plus+® system

The GUIDE Plus+® system is a free, interactive on-screen television programming guide. The system offers program listings for all major channels, one-touch recording, search by genre, recommendations according to your profile and more.

For the GUIDE Plus+ system to function correctly, it is important that you set the language and country correctly in the Setup Navigator, and that you have performed a scan for available channels, as these are all used by the GUIDE Plus+ system. If any of these things are not yet set, please run the Setup Navigator first (see *Switching on and setting up* on page 29).

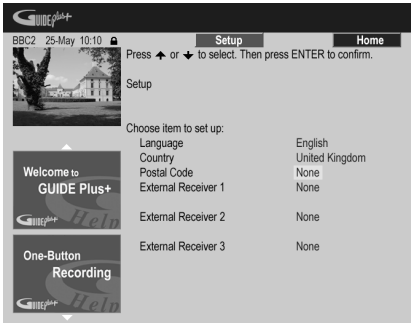
TV listings information is received via 'host channels'. In order to receive the correct TV listings information for your country or region you need to set up the GUIDE Plus+ system and 'download' the TV listings information. The initial download can take up to 24 hours, but once this is done, all future updates are automatic.

1 GUIDE **Display the GUIDE Plus+ setup menu.**

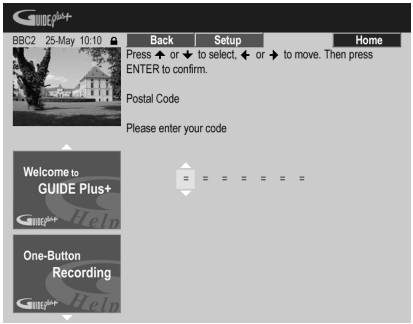


The language and country settings are already set to whatever you selected in the Setup Navigator.

2 ENTER **Highlight 'Postal Code'.**

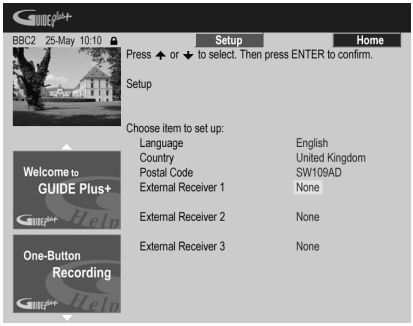


3 1 2 3 4 5 6 7 8 9 0 ENTER **Enter your postal code.**



The system uses your postal code to identify which TV listings data is correct for the area in which you live, so it is important that you enter it correctly.

4 If you are using an external receiver (such as a satellite receiver) with the supplied G-LINK cable, complete this step, otherwise jump to step 5 below.



- See *Connecting to a cable box, satellite receiver or digital terrestrial receiver* on page 18 for more on using the supplied G-LINK cable.
- Select **External Receiver 1**, **2** or **3**, then press **ENTER**. (If you have just one external receiver, use **External Receiver 1**. You can add further receivers in **2** and **3** if you need to.)

After pressing **ENTER**:

- Select your reception method (**Terrestrial**, **Cable** or **Satellite**).
- Select your provider (if applicable).
- Select the brand of your external receiver.
- Identify which input your external receiver is connected to.

After completing these steps the recorder will try and communicate with your external receiver and change the channel via the G-LINK cable. If the channel was successfully changed, select **Yes** to confirm.

If the channel did not change, select **No**. The GUIDE Plus+ system will try other codes assigned to your external receiver. If none of the codes changes the channel successfully, tune your external receiver to the host channel for your country (refer to step **5** below) and leave it on overnight. The recorder needs to be in standby; it will wake up automatically and download new codes from the host channel. The next day, try this setup process again:

- Press **GUIDE** to display the GUIDE Plus+ setup menu.
- Press ↑ to highlight the Menu bar, then use → to reach the Setup area and select Setup.
- Continue setting up from the start of this step again.

If your external receiver still doesn't respond to the G-LINK controller, please call customer support and report the brand and model of your external receiver.

See also *GUIDE Plus+ FAQ and troubleshooting* on page 49.

5 Identify the host channel for your country.

The TV listings information available in the GUIDE Plus+ system is distributed throughout Europe by selected broadcasters called *host channels*. It is important that the host channel for your country is correctly identified in order to receive listings information (EPG download).

Follow **A**, **B** or **C** below depending on your setup:

A If you *are not* using an external receiver, this recorder will automatically scan all channels for the host channel:

- Leave the recorder in standby overnight (do *not* leave it switched on).

B If you *are* using an external receiver, you need to identify the host channel from the table below:

Country/ Region	Host channels	Comments
Austria	Eurosport	
Belgium	RTL-TVI Music Factory (TMF)	TMF will be switched off in the near future.
France	Canal+	Analog only
Germany	Eurosport	
Italy	Sport Italia	Analog only
Netherlands	Music Factory (TMF), Eurosport	TMF will be switched off in the near future.
Spain	Tele 5	Analog only
Switzerland	Eurosport	
UK	ITV, Eurosport	ITV is analog only. Use Eurosport if you are a SKY subscriber and you no longer have a terrestrial antenna.

- Tune your external receiver to the appropriate host channel and leave the receiver on and the recorder in standby overnight.

C If you use *both* an external receiver and this recorder as sources, follow the instructions above for setting up without an external receiver. Only if this is unsuccessful try the external receiver method.

About EPG download

- EPG data can only be received when the recorder is in standby. (When not using the recorder, therefore, please switch it into standby.) If you're using an external receiver, leave this on when EPG data is downloading.
- If you cannot receive any of the host channels (see the above table) then you won't be able to use the GUIDE Plus+ system. In this case do not set the postal code (or set Country to **Other**) in the GUIDE Plus+ setup screen. (When GUIDE Plus+ service starts in your area, set the postal code again.)
- Even if you can't use the EPG functions where you live, you can still set VIDEO Plus+ timer recordings and manual recordings — see *Setting a timer recording* on page 59.
- The front panel display shows **EPG** when receiving data. If you power on the recorder during an EPG download, the download is canceled.
- EPG data may be received several times a day. All updates are automatic.
- When downloading EPG data, the recorder may sound as though it is on. This is normal.

Checking the downloaded data the following day

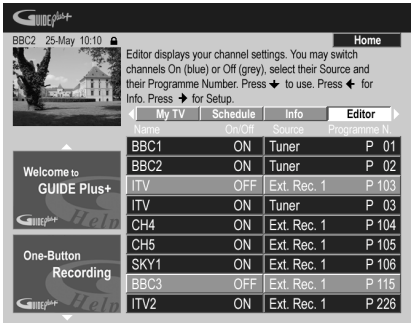
1 GUIDE Display the GUIDE Plus+ screen.

You should see a grid filled with channel logos and TV listings information. Use the ↑/↓ buttons to review the list. If you notice that there are channels missing, or that there are channels in the list that you don't get, go to the Editor screen:

- Press ↑ repeatedly until the Menu bar is highlighted.
- Press ➡ until **Editor** is highlighted. The main area of the screen now shows a list of channels. Those that are turned **ON** are displayed in the grid; those that are **OFF** are hidden. Use the ↑/↓/⬅/➡ buttons to move down the list and turn channels **ON** or **OFF** as necessary.
- For any channel that you turn **ON**, the GUIDE Plus+ system will need to know how it is received (the source) and on which program number. The source may be the built-in tuner of this recorder, or an external receiver. The program number is the number on which the channel can be found on its receiving device/source. The entry in the Editor screen must match this number for correct recording of that channel.
- The above is especially important for the 'host channel'. Please make sure that the host channel is always switched **ON**.

2 Change the program numbers as you like.

Changing the program numbers allows you to decide the order in which the channels change when stepping through them sequentially. You can do this to group certain channels together, for example.


BBC2 25-May 10:10
Home
Editor displays your channel settings. You may switch channels On (blue) or Off (grey), select their Source and their Programme Number. Press ↓ to use. Press ← for Info. Press → for Setup.
My TV
Schedule
Info
Editor
Name
On/Off
Source
Programme N.
BBC1 ON Tuner P 01
BBC2 ON Tuner P 02
ITV OFF Ext. Rec. 1 P 103
ITV ON Tuner P 03
CH4 ON Ext. Rec. 1 P 104
CH5 ON Ext. Rec. 1 P 105
SKY1 ON Ext. Rec. 1 P 106
BBC3 OFF Ext. Rec. 1 P 115
ITV2 ON Ext. Rec. 1 P 226
Welcome to GUIDE Plus+
One-Button Recording
Help

3 When you're done, press the BLUE Action button (Home) to get back to the GUIDE Plus+ home screen.

- You can find detailed information on using the GUIDE Plus+ system in the following chapter.

Chapter 5

Using the GUIDE Plus+® electronic program guide

The GUIDE Plus+ system

The GUIDE Plus+® system* is a free, interactive on-screen television programming guide.[1] The system provides program listings for all major channels, one-touch recording, searching by genre, recommendations according to your profile and more. The GUIDE Plus+ system is a convenient way to find out what's on right now or during the coming week, by channel or by genre. The GUIDE Plus+ system also allows you to automatically set your viewing and recording selections quickly and easily.

In order to receive the correct TV listings information for your country or region you need to set up the GUIDE Plus+ system and 'download' the TV listings information. If you haven't already done this, please turn to *Setting up the GUIDE Plus+® system* on page 32 before proceeding.

** GUIDE Plus+, SHOWVIEW, VIDEO Plus+, G-LINK are (1) registered trademarks or trademarks of, (2) manufactured under license from and (3) subject of various international patents and patent applications owned by, or licensed to, Gemstar-TV Guide International, Inc. and/or its related affiliates.*

Legal Notice

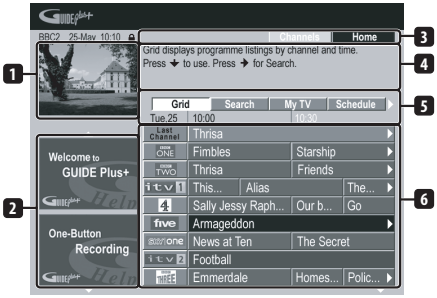
GEMSTAR-TV GUIDE INTERNATIONAL, INC. AND/OR ITS RELATED AFFILIATES ARE NOT IN ANY WAY LIABLE FOR THE ACCURACY OF THE PROGRAM SCHEDULE INFORMATION PROVIDED BY THE GUIDE PLUS+ SYSTEM. IN NO EVENT SHALL GEMSTAR-TV GUIDE INTERNATIONAL, INC. AND/OR ITS RELATED AFFILIATES BE LIABLE FOR ANY AMOUNTS REPRESENTING LOSS OF PROFITS, LOSS OF BUSINESS, OR INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE PROVISION OR USE OF ANY INFORMATION, EQUIPMENT, OR SERVICES RELATING TO THE GUIDE PLUS+ SYSTEM.

Note

1 The GUIDE Plus+ system can't be used when the Input Line System is set to **525 System** (see also *Input Line System* on page 116).

Using the GUIDE Plus+ system

All the various features and areas are colour-coded for ease of navigation. All screens (with the exception of some setup screens) have the following common elements:



1 **Video window** – Allows you to continue watching the current program while using the GUIDE Plus+ system.

2 **Information panels** – Display program promotions or instructions on the GUIDE Plus+ system.

3 **Action bar** – colour-coded Action buttons change function depending on the area.

4 **Information box** – Shows short program descriptions or help menus.

5 **Menu bar** – Gives access to the various areas of the GUIDE Plus+ system.

6 **Grid** – Shows TV listings information for the next seven days by channel and time.

GUIDE Plus+ navigation

The table below shows a summary of the remote buttons you'll use to navigate the GUIDE Plus+ system.

Key	What it does
● **REC**	Press to set or cancel One Button Recording.
GUIDE	Press to display the GUIDE Plus+ screen (also use to exit).
↑/↓/←/→	Use to navigate screens (highlight an item).
RED, **GREEN**, **YELLOW**, **BLUE**	Action buttons that change functionality depending on the Area.
MENU	Press to jump directly to the Menu bar.
TIMER REC (SHIFT + RED)	Press to go directly to the Schedule area.
INFO	Press to display extended information for the current program.
ENTER	Press to confirm a selection or to leave the GUIDE Plus+ screen.
Number buttons	Use for numeric entry.
⏮ / ⏭	Press to select the previous/ next page of information (in the grid, for example).
◀◀ / ▶▶	Press to select the previous/ next day.

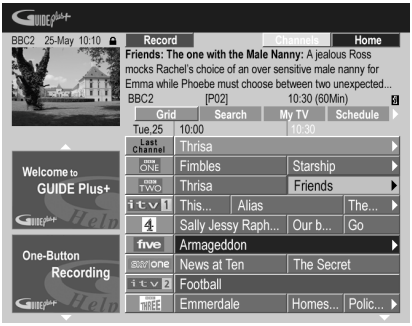
One-Button-Record

The **RED** Action button (Record) is visible anytime you can highlight a program title, including from the Grid, after a search, or in your recommendations in the My TV area.

The program name, date, channel, recording start and end times are all set automatically when you set a timer recording using One-Button-Record.

If you need to, you can edit the settings at any time before the recording is due to start (see *Editing a scheduled recording* on page 43).

1 **Highlight a program title.**



2 **Press the RED Action button (Record).**

The program is now set for recording. When the program is due to start, the recorder will switch to the correct channel and start recording[1].

- You can also use the ● **REC** button to set the recording.
- You can review the shows you have set to record in the Schedule Area (see also *The Schedule Area* on page 43).

Lock / Unlock video window

When you enter the GUIDE Plus+ system, the channel you were watching remains visible in the video window. The date stamp above the window lets you know the channel, date and time.

The default setting for this window is 'locked', as indicated by a closed padlock icon above the video window. When locked, the video window always shows the channel you were previously watching as you move up and down through the listings grid.

If you prefer, you can unlock the video window so that as you highlight different channels in the listings grid, that channel is shown in the video window.

1 **Highlight a channel logo.**

Channel logos are displayed to the left of program titles.

2 **Press the RED Action button (Unlock).**

The padlock icon above the video window becomes unlocked. It remains unlocked for the remainder of your current TV viewing session.

If you want to lock the video window again, follow the same procedure. The **RED** Action button will now act as Lock.

Note

1 Recording times set using the GUIDE Plus+ system do not automatically change to reflect any changes that may occur in the program broadcast schedules.

Channel mosaic screen

You can switch the display style of channels in the Grid Area, Schedule Area or My TV Area from a list to a mosaic of channel icons by pressing the **YELLOW** Action button. Select the channel icon you want using the cursor buttons, then press **ENTER** to return to the previous screen on that channel.

Areas

The GUIDE Plus+® system consists of seven *Areas*. All Areas can be accessed from the Menu bar.

- **Grid** – The GUIDE Plus+ system Home Area. Displays TV listings information for the next seven days by time and channel.
- **Search** – Search for TV programs by category (e.g., Sport), subcategory (e.g., Football) or keyword.
- **My TV** – Set up a profile and receive recommendations according to your preferences.
- **Schedule** – Show all scheduled recordings.
- **Info** – Area for additional information, such as weather (not available in all regions).
- **Editor** – Change channel settings.
- **Setup** – Setup the GUIDE Plus+® system.

The Grid Area

The Grid is the main TV listings screen of the GUIDE Plus+ system and is the first screen that you see when you press **GUIDE**. You can see TV listings for the next seven days, starting with the current day.

When you highlight a program in the Grid, you can see information about it in the Information Box, including title, synopsis, channel, source, time and length. If there is an **i** symbol in the Information Box, it means that there is an extended synopsis available. Press the **INFO** button to see it.

In some countries, you can also see a rating for a particular program (mostly movies). These ratings are provided by local partners, such as TV magazines.

From the Grid Area you can:

- View and scroll through program listings
- Read program synopsis
- Tune to a program that's currently showing[1]
- Set a program to record
- Lock or unlock the video window.
- Access Information panels.

Note

1 If you're using an external tuner (satellite tuner, for example), there will be a short delay of a couple of seconds while it tunes to the channel. This is normal.

Browsing the Grid

Use the following remote buttons to browse the grid:

↑/↓/←/→ (cursor buttons) – Navigate the Grid

I◄◄/►►I – Previous / next page

◄◄/►► – Previous / next day

BLUE Action button – Return to the current time/date in the Grid.

ENTER – Press on the current selection to exit the GUIDE Plus+ system and start watching the program

The Search Area

From the Search Area you can:

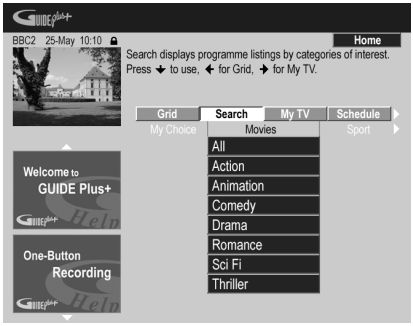
- Search by category
- Search by subcategory
- Search by keyword
- Read program synopsis
- Tune to a program that's currently showing
- Set a program to record
- Access Information panels.

Searching

You can search for programs by category, subcategory or by keyword (My Choice). Categories for searching include Movies (purple), Sport (green), Children (blue) and Others (teal). In some countries there is a further subcategory available called 'Tip of the Day'. These are programs recommended by a local partner, such as a TV magazine.

1 **Select 'Search' from the Menu bar.**

2 **Select a category and a subcategory.**



- If you choose **All** as the subcategory, all programs in the category you selected will show up in the search results.

3 **Start the search.**

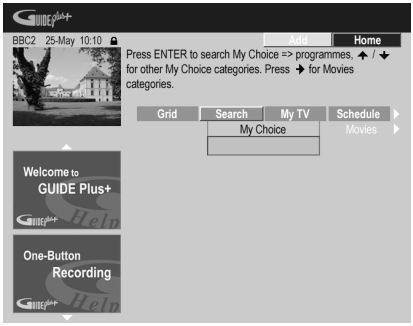
The search results are shown sorted by time and date.

- If no search results are displayed, it means there are no programs for the current day that match your search criteria.

Using My Choice keywords for a search

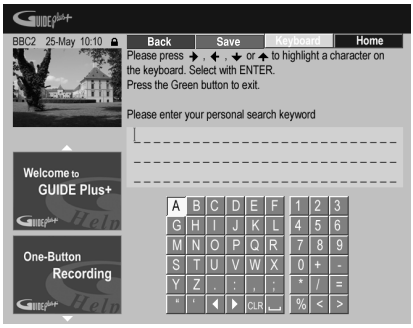
In addition to the standard categories, you can also set your own keywords.

1 **Access My Choice.**



2 **Press the YELLOW Action button to add a keyword.**

3 **Enter a keyword to appear in the menu.**


BBC2 25-May 10:10
Back
Save
Keyboard
Home
Please press →, ←, ↓ or ↑ to highlight a character on the keyboard. Select with ENTER.
Press the Green button to exit.
Please enter your personal search keyword
Welcome to GUIDE Plus+
One-Button Recording
A B C D E F 1 2 3
G H I J K L 4 5 6
M N O P Q R 7 8 9
S T U V W X 0 + -
Y Z . : , ; * / =
' CLR % < >

When you're finished, press the **GREEN** Action button to exit and continue.

4 **Start the keyword search.**

- You can delete or edit keywords using the **RED** and **GREEN** Action buttons.
- When you have set more than two keywords, an **All** subcategory automatically appears which allows you to search for all your keywords.

My TV Area

The My TV Area allows you to set up a personal profile. You can define a profile by channels, themes and/or keywords. As soon as a personal profile has been set, the GUIDE Plus+ system continuously scans the TV listings for the next seven days. Whenever you access the My TV Area, a list of programs matching your profile appears.

From the My TV Area you can:

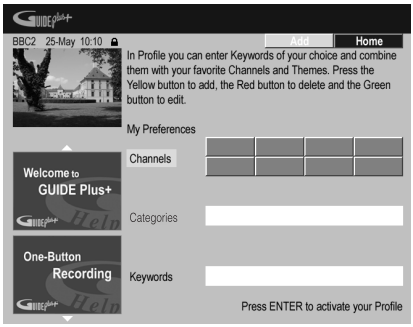
- Set up a profile by channel, theme and/or keyword.
- Edit and delete profiles.
- Read program synopsis
- Tune to a program that's currently showing
- Set a program to record
- Access Information panels.

Setting up a profile

You can set up a profile with any combination of up to 16 channels, four categories and 16 keywords.

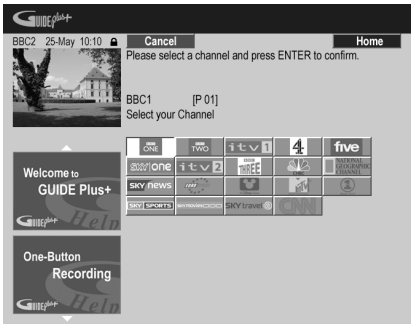
1 **Select 'My TV' from the Menu bar.**

2 Press the YELLOW Action button to set a profile.


BBC2 25-May 10:10
Add
Home
In Profile you can enter Keywords of your choice and combine them with your favorite Channels and Themes. Press the Yellow button to add, the Red button to delete and the Green button to edit.
My Preferences
Channels
Categories
Keywords
Press ENTER to activate your Profile
Welcome to GUIDE Plus+
One-Button Recording

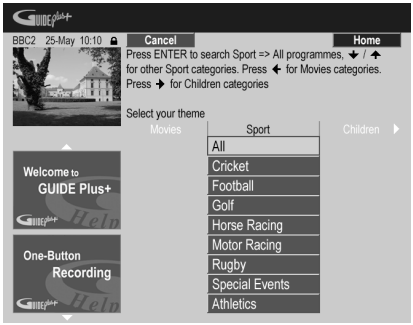
Channels is now highlighted.

3 To add a channel to your profile, press the YELLOW Action button.



Select a channel from the mosaic of channel icons and press **ENTER**. Repeat this step to add up to 16 channels.

4 To add a theme to your profile, highlight 'Themes' and press the YELLOW Action button.



Select a theme from the Search Area categories and press **ENTER**. Repeat this step to add up to four categories.

5 To add a keyword to your profile, highlight 'Keywords' and press the YELLOW Action button.

BBC2 25-May 10:10
Back
Save
Keyboard
Home
Please press →, ←, ↓ or ↑ to highlight a character on the keyboard. Select with ENTER.
Press the Green button to exit.
Please enter your personal search keyword
Welcome to GUIDE Plus+
One-Button Recording

Use the ⬆/⬇/⬅/➡ buttons followed by **ENTER** to select characters from the on-screen keyboard. When you're finished, press the **GREEN** Action button to exit and continue.

6 Press ENTER to activate your profile.

- You can add up to 16 keywords by repeating step **5**.
- You can edit or delete your profile using the **RED** and **GREEN** Action buttons.

The Schedule Area

The Schedule Area is where you can set, see, edit and delete scheduled (timer) recordings. (See also *Setting a timer recording* on page 59 for further timer recording features.)

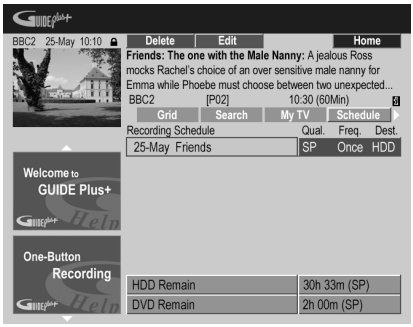
From the Schedule Area you can:

- Edit or delete a One-Button-Recording.
- Set, edit or delete a VIDEO Plus+ recording.
- Set, edit or delete a manual recording.

Editing a scheduled recording

You can edit any parameter in a scheduled recording, or delete it if you no longer require it.

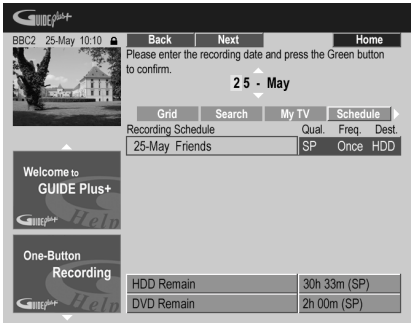
1 Highlight the left tile of a scheduled recording.



- If you only want to edit the recording quality, frequency, destination, timing or genre settings, skip to step **6** below.

2 Press the GREEN Action button (Edit).

3 Use the cursor and number buttons to edit the recording date, start time, end time and channel.



Use the ⬆/⬇ (cursor up/down) buttons or the number buttons to edit.

Press the **GREEN** Action button to go to continue, or the **RED** Action button to go back.

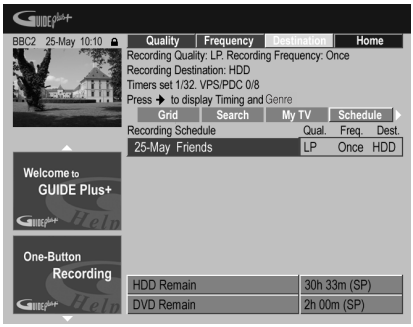
4 Enter a name for the scheduled recording.

Use the ⬆/⬇/⬅/➡ buttons followed by **ENTER** to select characters from the on-screen keyboard.

After entering the whole name, press the **GREEN** Action button to continue.

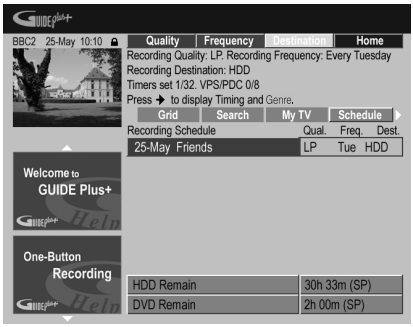
5 Highlight the right recording tile.

6 Press the RED Action button (Quality) to change the recording quality.



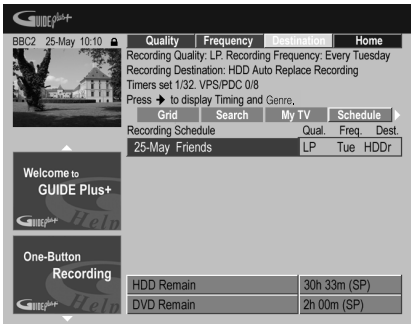
Select from **AUTO**[1], **XP**, **SP**, **LP**, **EP**, **SLP**, **SEP** or **MN** (if manual recording is set to **On**.)

7 Press the GREEN Action button (Frequency) to change the recording frequency.



Select from the various options for one-time, daily and weekly recordings.

8 Press YELLOW Action button (Destination) to select the recording destination.



Select from **DVD**, **HDD** or **HDDr** (Auto Replace Recording)[2].

- Auto Replace Recording is only available as an option with regular daily or weekly recordings.

Note

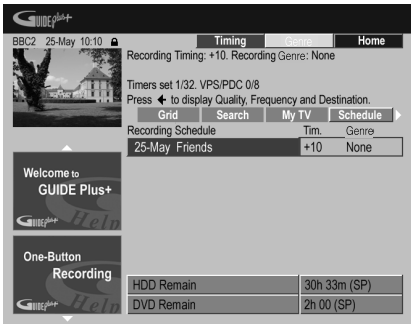
1 This mode maximizes the recording quality to fit on to a single DVD disc. Can also be used when recording to HDD.

2 • For a DVD timer recording, if **Optimized Rec** (see *Optimized Rec* on page 123) is set to **On** (and VPS/PDC is off), the recorder will adjust the recording quality to try and fit the recording on the disc. If the recording will not fit onto the disc even on MN1 recording quality then the Recovery Recording feature will automatically make the recording to the HDD instead.

• If there is very little free space left on the HDD, an Auto Replace Recording may not complete successfully.

• If the HDD is being used for playback or high-speed copying when an Auto Replace Recording is due to start, the new timer recording will not replace the old one. However, the next time the timer recording starts, both of the older two programs will be erased.

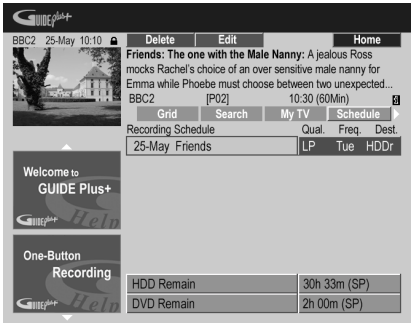
9 Press ➡ (cursor right) to access the extended recording options:



- If you want to record to a particular HDD genre, use the **YELLOW** Action button (**Genre**) to select one.
- Use the **GREEN** Action button (**Timing**) to add extra time to the end of the recording (**+0**, **+10**, **+20**, **+30** or VPS/PDC[1] (**V–P**)).
- Press ⬅ (cursor left) to display the standard recording options again.

Deleting a scheduled recording

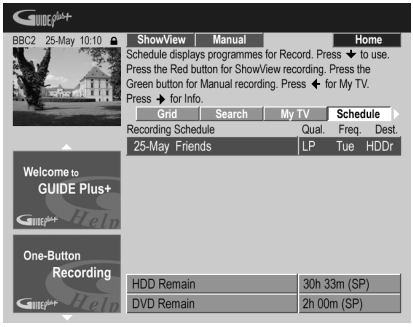
1 Highlight the left tile of a scheduled recording.



2 Press the RED Action button (Delete).
The scheduled event is deleted.

Setting a VIDEO Plus+® recording

1 Select 'Schedule' from the Menu bar.

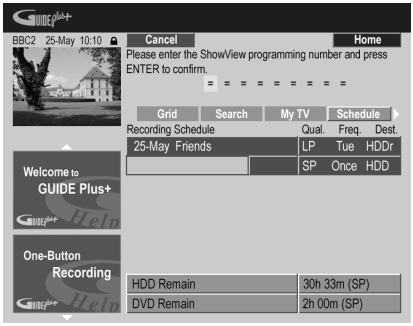


Note

1 • If you set the timer recording to use VPS/PDC, you must switch the recorder into standby before the timer recording is due to start for it to work correctly. For non-VPS/PDC timer recordings there is no need to switch the recorder into standby.
• Optimized Recording will not work if VPS/PDC is on.
• Up to 8 timer recordings can be set with VPS/PDC.
• VPS/PDC cannot be set for recordings made from an external input, or when the recording mode is set to **AUTO**.

2 Press the RED Action button (VIDEO Plus+).

3 Use the number buttons to enter a Plus Code programming number.

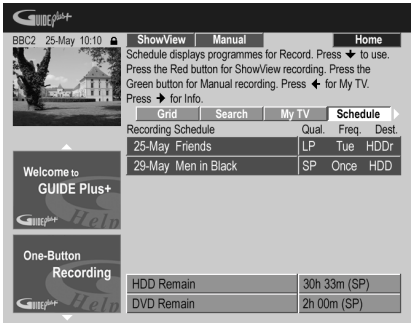


- If you live in an area not yet covered by the GUIDE Plus+ system you may also have to input a channel number. Follow the on-screen display to do this.

4 Press ENTER to confirm.

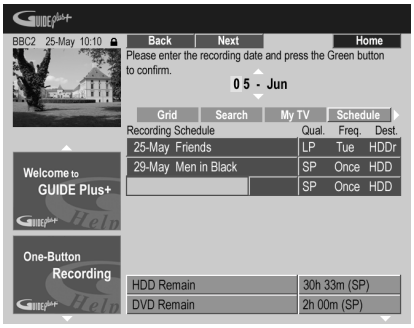
Setting a manual recording

1 Select 'Schedule' from the Menu bar.



2 Press the GREEN Action button (Manual).

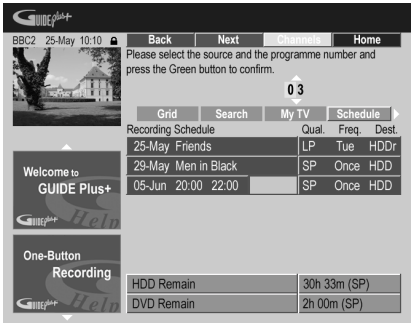
3 Use the number and ⬆/⬇/⬅/➡ buttons to enter the recording date, then press the GREEN Action button (Next).



4 In the same way, enter the recording start time, followed by the GREEN Action button (Next) to confirm.

5 Enter the recording end time in the same way, followed by the GREEN Action button (Next) to confirm.

6 Use the number buttons to enter a channel number, then press the GREEN Action button (Next) to confirm.



Alternatively, you can press the **YELLOW** Action button (**Mosaic**) and use the ⬆/⬇/⬅/➡ buttons to select a channel from the mosaic, followed by **ENTER**.

The Info Area

This area is reserved for additional information such as news, weather reports, stock quotes, and so on, and varies by region. (Note that this feature is not available in all countries/regions.)

The Editor Area

The Editor Area is the central location for you to manage your channels. Any changes you make here will affect what is displayed in the Grid Area. The Editor Area is mainly used when setting up the GUIDE Plus+ system to make any manual changes as necessary.

You can also use the Editor Area if new channels become available in your area, or if you change from cable to satellite, say, or move house.

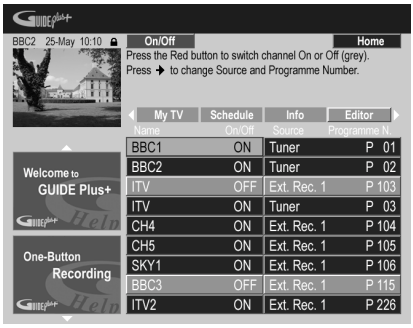
From the Editor Area you can:

- Display/hide channels in the grid (switch the channel on/off).
- Select a channel source (**Tuner**, **Ext. Rec. 1**, **Ext. Rec. 2**, etc.).
- Enter a channel program number.

Switching a channel on/off

You can choose whether or not to display a channel in the Grid Area by switching the channel on or off in the Editor Area.

1 Select 'Editor' from the Menu bar.

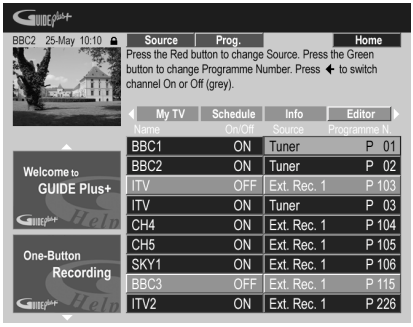

BBC2 25-May 10:10
On/Off
Home
Press the Red button to switch channel On or Off (grey).
Press ➔ to change Source and Programme Number.
My TV
Schedule
Info
Editor
Name
On/Off
Source
Programme N.
BBC1 ON Tuner P 01
BBC2 ON Tuner P 02
ITV OFF Ext. Rec. 1 P 103
ITV ON Tuner P 03
CH4 ON Ext. Rec. 1 P 104
CH5 ON Ext. Rec. 1 P 105
SKY1 ON Ext. Rec. 1 P 106
BBC3 OFF Ext. Rec. 1 P 115
ITV2 ON Ext. Rec. 1 P 226
Welcome to GUIDE Plus+
One-Button Recording

2 Highlight the left channel tile of the channel you want to switch on or off.

3 Press the RED Action button to switch the channel on or off.

Changing the source and program number

1 Select 'Editor' from the Menu bar.


BBC2 25-May 10:10
Source
Prog.
Home
Press the Red button to change Source. Press the Green button to change Programme Number. Press ➔ to switch channel On or Off (grey).
My TV
Schedule
Info
Editor
Name
On/Off
Source
Programme N.
BBC1 ON Tuner P 01
BBC2 ON Tuner P 02
ITV OFF Ext. Rec. 1 P 103
ITV ON Tuner P 03
CH4 ON Ext. Rec. 1 P 104
CH5 ON Ext. Rec. 1 P 105
SKY1 ON Ext. Rec. 1 P 106
BBC3 OFF Ext. Rec. 1 P 115
ITV2 ON Ext. Rec. 1 P 226
Welcome to GUIDE Plus+
One-Button Recording

2 Highlight the right channel tile of the channel you want to make a change to.

3 Press the RED Action button to change the channel source, or the GREEN Action button to enter a program number.

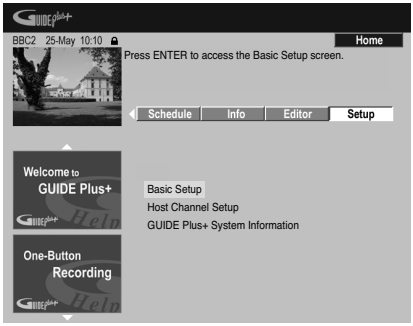
Each press of the **RED** Action button changes the channel source (**Tuner**, **Ext. Rec. 1**, etc.). To set a program number, use the number buttons to enter a program number then press **ENTER**. (When set to **Tuner**, make sure that the program number matches the preset number of this recorder for what you want to record).

The Setup Area

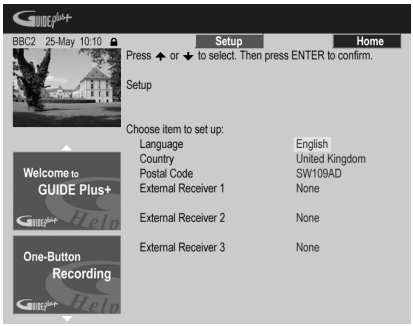
The Setup Area is where you can set up the GUIDE Plus+ system for your particular region, TV reception conditions, and so on.

Making changes to your GUIDE Plus+ setup

1 Select 'Setup' from the Menu bar.



2 Highlight the part you want to change.



You can change the Language, Country, Postal Code[1] and the External Receiver settings.

3 Press ENTER to confirm.

Manual Host Channel setup

The GUIDE Plus+ system will automatically identify your Host Channel as soon as the recorder is put into standby for the first time. See the table on page 34 for a list of all the European Host Channels.

If you know your Host Channel details (source and program number) or if the automatic identification did not provide the expected result, you can identify your Host Channel manually. Select **Host Channel Setup** in the Setup area and follow the instructions on the TV. Select the correct source (e.g., internal tuner or external receiver) and enter the respective program number (e.g., if you have to press 9 on the remote to watch your Host Channel, enter 9

Note

1 Making changes to the Country or Postal Code settings may require a new download of TV listings information. This can take up to 24 hours.

as the program number). When you next switch the recorder into standby the GUIDE Plus+ system will complete the Host Channel setup.

You can reset the Host Channel settings at any time back to the default setting of automatic. Please be aware that resetting the Host Channel will erase all TV listings data.

GUIDE Plus+ FAQ and troubleshooting

This FAQ covers only a few questions. For a complete list please consult the GUIDE Plus+ website at: www.europe.guideplus.com

FAQ

- *When I tried setting up my external receiver I could not get any of the attempts to work, what should I do?*

  A: There could be several reasons why your external receiver could not be controlled.

  – The connections could be wrong. Make sure that the G-LINK cable is connected to the G-LINK connector on the recorder and the IR blaster is in front of the external receiver, pointing towards the IR receiver of your external receiver. See *Connecting to a cable box, satellite receiver or digital terrestrial receiver* on page 18.

  – The code that is listed under your brand could be wrong. Please try other codes for your brand under satellite, cable or terrestrial. Go to the Setup Area and choose one of the three options (cable, satellite or terrestrial) that you have not already tried. Follow the on-screen prompts to make sure that the GUIDE Plus+ system can change channels on your external receiver. If it does not work, repeat the process, choosing different reception and external receiver combinations until you have tried all the codes for your brand of receiver that are already in the GUIDE Plus+ system. If it still does not work, see below on how to receive new codes overnight.

  – The unit has not yet received new codes. The nightly data downloads frequently include new codes for controlling external receivers. Please tune your external receiver to your local host channel and leave it on overnight. Switch this recorder into standby. The next morning, please perform the GUIDE Plus+ setup again to see if your external receiver can now be controlled.

  – The external receiver that you use is currently not supported. If, after leaving your external receiver on overnight, and doing the Reception and External Receiver Setup again, it still does not respond, please call Customer Support to report your brand and model.

- *My external receiver was successfully setup. However I have found that when the GUIDE Plus+ system has to change to a channel with a 3-digit program number in the external receiver's preset, it does not work. It looks like the GUIDE Plus+ system can only send two digits.*

  With the number of channels increasing, the number of digits has increased as well. While older boxes use only 2 digits, newer boxes require up to 4. It is possible that you selected an older code for your brand during set-up. Please access the Setup Area, select External Receiver and repeat the setup for your brand (Note: Every time you see

the on-screen question about whether the receiver has changed to a certain channel, the GUIDE Plus+ system has sent a different code). Try all the different codes until your GUIDE Plus+ system can control your external receiver correctly. If you have no success, try to receive new codes overnight.

- *I used to receive data through my terrestrial antenna or analog cable without a set-top box. Now, I have "upgraded" to a satellite system or to digital cable with external receiver. What should I do to receive data for the GUIDE Plus+ system?*

  You can try to receive your host channel through your new reception method. If you have problems to receive data we recommend that you keep your analog terrestrial or cable connection only to receive data this way. It is important that you identify your host channel correctly in the Editor Area.

- *After I performed the initial set-up I found that the line-up for all the channels received via the external set top box is incorrect. How do I correct this?*

  You can change the line-up in the editor according to your preferences. Access the Editor Area. Select the channels that you would like to change. Change the source and preset number according to your preferences.

- *I performed the set-up but after many hours I still have a blank EPG what is going wrong?*

  There are several possibilities:

  – Connections are wrong. See *Connecting up* on page 14 to double check everything.

  – The initial setup of GUIDE Plus+ was completed incorrectly. Try setting it up again (see *Setting up the GUIDE Plus+® system* on page 32).

  – Your cabling and setup is OK, but the recorder has not been connected for enough time to receive the TV listings data. Leave the recorder in standby overnight.

  – For external receiver users only: The connections and setup are OK, but the external receiver was not tuned to the correct host channel. Check the list of host channels (see step 5 of *Setting up the GUIDE Plus+® system* on page 32) and leave the recorder in standby and the external receiver on overnight tuned to the correct host channel.

  – You live in a country/region where the GUIDE Plus+ system is not yet available. Check the list of countries to see if you are in a region that is supported.

- *I used the One-Button-Record feature (red Action button) to set a recording, but I recorded the wrong channel.*

  If the channel to be recorded is received via the external receiver first make sure that the external receiver was left switched on. Next, in the Editor Area, make sure that the channel to be recorded is correctly set: Access the Editor Area. Check the source and program number of the channel that you wanted to record. Change the source and preset numbers if incorrect.

  If you are recording from the recorder's internal tuner (the **Tuner** setting), make sure that the program number is the same as the preset number set on this recorder. If they are different, go to the Editor Area and change the program number to match the recorder's preset number.

- *The TV listings information doesn't update.*

  The latest TV listings information is automatically downloaded by the recorder overnight. This only happens if the recorder is in standby; if the recorder is left on, it will not download. When not using the recorder, please switch it into standby.

  Data downloads can take several hours. The front panel display shows **EPG** when downloading. If you switch the recorder on while **EPG** is displayed, the download will be canceled.

- *The GUIDE Plus+ system is not supported in my area, but when I switch the recorder into standby, after a while the front panel display shows* **EPG**. *Can I stop this from happening?*

  If the GUIDE Plus+ system is not supported in your area, please do not set the postal code in the GUIDE Plus+ setup (see *Setting up the GUIDE Plus+® system* on page 32). When the GUIDE Plus+ service starts in your area, please set the postal code again.

- *The automatic Host Channel search failed or the GUIDE Plus+ system identified the wrong Host Channel for my region.*

  You can identify your Host Channel manually. See *Manual Host Channel setup* on page 48 for how to do this.

Chapter 6
Recording

About DVD recording

This recorder can record to DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM, DVD-R DL and DVD+R DL media.

DVD-R and DVD-RW discs can be initialized for *Video mode* or *VR mode* recording. Each has its advantages, and it depends on what you want to do with the recording which mode you choose.

If you want to edit your recordings in any significant way, VR mode offers greater possibilities for cutting, copying, and changing the way the video is presented.

Video mode is less flexible when it comes to editing, but it has the advantage that it is compatible with standard DVD players

(many of which won't play VR mode discs[1]).

Once a disc is initialized for a particular mode, all recording on that disc will be in that mode.

DVD+RW discs can be initialized for *+VR mode* recording.

DVD-RAM discs can be initialized for VR mode recording.

DVD+R discs do not require initializing.

Important

The table below shows the maximum number of titles recordable per disc and the maximum number of chapters per title:

Disc type/rec. format	Max. titles (per disc)	Max. chapters (per title)
DVD-R/-RW Video mode	99	99
DVD-R/-RW/RAM VR mode	99	999*1
DVD+R/+RW	49	99*2

*1 *A maximum of 999 chapters are recordable per disc.*
*2 *A maximum of 254 chapters are recordable per disc.*

- This recorder cannot play or record unfinalized Video mode and DVD+R discs recorded on another recorder. DVD+RW discs recorded on another recorder are playable on this recorder but are not recordable.
- The maximum continuous recording time for one title is eight hours when using a DVD+R/+RW disc.
- If you delete a title from a DVD+R/+RW disc, the total number of recordable titles remaining may not increase.
- Although this recorder can record PAL, SECAM, NTSC and PAL-60, you can't mix multiple TV line systems on one disc. A disc can contain PAL and SECAM recordings, or NTSC and PAL-60. See also *Additional information about the TV system settings* on page 127.

Note

1.Some DVD players, such as some Pioneer models, are compatible with VR mode discs. Check the operating instructions for your player for VR mode compatibility information.

- Fingerprints, dirt and small scratches on a disc can affect playback and/or recording performance. Please take proper care of your discs.
- Pioneer takes no responsibility for recording failure due to power cuts, defective discs, or damage to the recorder.
- See also *Disc / content format playback compatibility* on page 7 for detailed disc compatibility information.

Recording to DVD-R DL/DVD+R DL discs

Recording to DVD-R DL/DVD+R DL discs is generally the same as recording to regular single-layer discs; however, please note the following points:

- When the recorder switches from the first layer to the second during recording a DVD-R DL (Video mode) disc, a new title is automatically started on the new layer.
- Up to 99 titles can be recorded on a DVD-R DL (Video mode) disc. If the 99th title is being recorded when the layer is switched, recording will stop.
- Up to 49 titles can be recorded on a DVD+R DL disc.
- You cannot play, record additional material to, edit or finalize a DVD-R DL or DVD+R DL disc that has been recorded on but not yet finalized on another DVD recorder.

About HDD recording

Recording to the internal hard disk drive (HDD) is very flexible; you have the full choice of recording quality options, including manual mode, and of course you can record, erase and re-record as many times as you like.

The capacity of the hard disk drive means that you can store many hours of video on it, even using the higher quality recording modes.

Important

- The maximum number of titles/chapters per title that can be recorded on the HDD is 999 and 99 respectively. No more recording is possible on the HDD after the maximum number of titles has been reached.
- The maximum continuous recording time for one title is 12 hours.
- It is possible to record both PAL and NTSC titles on the HDD. Before recording, you need to make sure that the Input Line System setting (page 127) matches the TV line system of the source you're recording.

HDD Video mode compatibility

When recording to the HDD you can choose to record in one of two formats. Set the format from the HDD Recording Format item in the Initial Setup menu (see page 124).

When set to Video Mode On, high-speed copying from HDD to Video mode DVD-R/-RW or DVD+R/+RW is possible. When recording a bilingual broadcast, set which channel you want to record from the Initial Setup menu (see *Bilingual Recording* on page 120).

When HDD Recording Format is set to Video Mode Off, high-speed copying isn't possible. However, both channels of bilingual broadcasts are recorded and you can switch the audio on playback.

Recorded audio

In all except the **LPCM** mode, sound is recorded in two channel Dolby Digital format *(only Dolby Digital 2.0 can be recorded; Dolby Digital 5.1 recording is not possible)*. When set to **LPCM**, sound is recorded in high quality, uncompressed Linear PCM format.

If the broadcast audio is bilingual and you are recording to Video mode DVD-R/-RW, DVD+R/+RW, or to the HDD with the HDD Recording Format set to Video Mode On, or on the **LPCM** setting, use the Bilingual Recording setting (page 120) to select the **A/L** or **B/R** audio channel to record before recording starts. In other cases, both channels of a bilingual broadcast will be recorded and you can switch on playback.

Restrictions on video recording

You cannot record copy-protected video using this recorder. Copy-protected video includes DVD-Video discs and some satellite broadcasts. If copy-protected material is encountered during a recording, recording will pause automatically and an error message will be displayed on-screen.

Video that is 'copy-once only' can only be recorded to HDD, CPRM-compatible VR mode DVD-R/RW (see below), or DVD-RAM.

When recording a TV broadcast or through an external input, you can display copy control information on screen. (see *Displaying disc information on-screen* on page 79).

CPRM

CPRM is a copy protection/scrambling system developed for the recording of 'copy once' broadcast programs. CPRM stands for *Content Protection for Recordable Media*.

This recorder is CPRM compatible, which means that you can record copy-once broadcast programs, but you cannot then make a copy of those recordings. CPRM recordings can only be made on CPRM-compatible DVD-R (ver. 2.0 / 8 x or higher) or DVD-RW (ver. 1.1 or higher) discs formatted in VR mode, DVD-RAM discs or on the HDD.

DVD CPRM recordings can only be played on players that are specifically compatible with CPRM.

Recording equipment and copyright

Recording equipment should be used only for lawful copying and you are advised to check carefully what is lawful copying in the country in which you are making a copy. Copying of copyright material such as films or music is unlawful unless permitted by a legal exception or consented to by the rightowners.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Using the built-in TV tuner

There are three different ways to select TV channels. Note that you can't change the TV channel during playback, recording or during recording standby.

- **CHANNEL +/– buttons**
- **Number buttons**

  For example, to select channel 4, press **4** then **ENTER**; for channel 34, press **3**, **4**, **ENTER**.[1]
- **CH +/–** buttons on the front panel

Changing audio channels

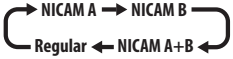
You can change the audio channel of the broadcast or external input signal.

- SHIFT + AUDIO (4) **Press to change the audio type.**

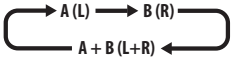
The current audio channel is displayed on-screen.

- If the NICAM audio setting (see *NICAM Select* on page 120) is set to **NICAM** and you are watching a NICAM broadcast, you can switch between **NICAM** and **Regular** (non-NICAM) audio.

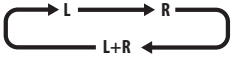
- If the NICAM broadcast is bilingual, you can also select the language.



- You can also select the language for a non-NICAM bilingual broadcast.



- When watching a recording made from an external input with **Bilingual** recording selected (see *External Audio* on page 120), you can switch the audio channel between left (**L**), right (**R**) or both (**L+R**).



Note

- When recording to the HDD with HDD Recording Format set to Video Mode On, to DVD in Video mode, or on the **LPCM** setting, only one channel of a bilingual broadcast is recorded. In this case, decide which language you want to record before recording by setting the Bilingual Recording setting (see *Bilingual Recording* on page 120).

Switching between TV and DVD

When the recorder is stopped or recording you can choose whether to have the audio/video from the built-in TV tuner (or external input) play on your TV ('DVD mode'), or watch the channel that the TV is currently set to ('TV mode').

Note

1. Channel presets are numbered 1 to 99.

During playback or when a menu is being displayed on-screen, the sound and video is always routed to your TV and is unaffected by the **TV/DVD** mode setting.

Note that the recorder must be connected to your TV using a SCART cable to be able to use this feature.

• TV/DVD **Switch between TV mode and DVD mode.**

Setting the picture quality/ recording time

DVD (VR) DVD (Video) DVD+R DVD+RW DVD-RAM

HDD

Before starting a recording, you will usually want to set the picture quality/recording time. There are six standard settings available, which allow you to choose a balance between picture quality and recording time.

When Manual Recording is set to On (see *Manual Recording* on page 123), a further option will be available (**MN1** to **MN32** or **LPCM**, depending on what you set).

When recording to DVD+R/+RW, **SLP** is the longest recording time available. If you select **SEP** or **MN1** to **MN3**, the recording mode will automatically revert to **SLP**.

• SHIFT + REC MODE **Press repeatedly to select the recording quality.**

- **XP** – High quality setting, gives about one hour of recording time on a DVD disc.
- **SP** (Standard Play) – Default quality, used for most applications, gives about two hours of recording time on a DVD.
- **LP** (Long Play) – Lower video quality than SP, but doubles the recording time on a DVD to about four hours.
- **EP** (Extended Play) – Lower quality than LP, but gives about six hours of recording time on a DVD disc.
- **SLP** (Super Long Play) – Lower quality than EP, but gives about eight hours of recording time on a DVD disc.
- **SEP** (Super Extended Play) – Lowest video quality but gives about ten hours of recording time on a DVD disc.
- **MN1** to **MN32** / **LPCM**[1] – Manual / Linear PCM (available only when manual recording is on)

The setting is indicated in the front panel display, and shown on-screen together with the recording time for a blank recordable disc. If a recordable disc is loaded, the approximate remaining recording time for that disc is also shown. (Note that if the On Screen Display setting (see *On-Screen Display* on page 126) is **Off** then this information is not displayed.)

Note

1. Audio is recorded in 16-bit Linear PCM format, video is recorded at XP quality. When recording a bilingual broadcast, select which audio channel to record (see *Bilingual Recording* on page 120).

Basic recording from the TV

DVD (VR) DVD (Video) DVD+R DVD+RW DVD-RAM

HDD

Basic recording from the TV involves just setting the channel to record, choosing whether to record to the HDD or a DVD and selecting the recording quality.

1 HDD/DVD Select the HDD or DVD for recording.

- If you're recording to DVD, load a recordable disc (if you load a new blank DVD-RW or DVD+RW disc, the recorder takes a short while to initialize the disc).
- If you want to record a VR mode DVD-R or a Video mode DVD-RW, you must initialize it before proceeding (see *Initializing recordable DVD discs* on page 66).

2 Select a TV channel to record.

The front panel display shows the channel number:

- While the recorder is stopped, you can also use the number buttons on the remote to select the channel. (For channel 24, press **2, 4** then **ENTER**)
- If the recorder is stopped, you can also use the **CH +/–** buttons on the front panel to select the channel number.

3 SHIFT + REC MODE Set the picture quality/ recording time.

- See *Setting the picture quality/recording time* on page 56 for detailed instructions.

4 SHIFT + AUDIO Select the audio channel to record.

See *Changing audio channels* on page 55 for more on this.

- When recording in VR mode, if a broadcast is bilingual, both audio channels are recorded, allowing you to switch the audio channel on playback. The only exception to this is when the picture quality is set to **LPCM**, in which case you do need to select the audio channel before recording.

5 REC Start recording.

If you want to set a recording end time, press the ● **REC** button repeatedly. The recording time increases in 30 minute increments, up to a maximum of six hours. The time the recording will end is shown on-screen and in the front panel display. When the recording ends, the recorder automatically switches into standby if no other operation is being performed.

- To cancel the set recording time, press ● **REC**.
- If you want to pause recording at any time, press **II PAUSE**. Press again to restart the recording. (If recording to the HDD, DVD-RAM or in VR mode, a new chapter is started after recording restarts)

6 STOP REC **Press to stop recording.**

- If you set the recording time in the previous step, you can still stop the recording anytime by pressing **STOP REC**.
- Recording will stop automatically when there is no more space on the HDD/DVD, or after 12 hours of HDD recording (whichever is sooner).

  If VPS/PDC is active for two timer programs that are programmed to start at the same time, then the program that actually starts first takes priority.

Tip

- During recording you can turn on/off the SCART loop through function. During recording, press the front panel **CH +** button to switch to **SCART THRU** (loop through on), or **CH –** to switch to **SCART NORM** (loop though off). Loop through is automatically reset to off after recording has finished. Note that you can't switch loop through on if recording from the **AV2/(INPUT 1/DECODER)** or **AV1(RGB)-TV** connectors.

Pause Live TV

HDD

The Pause Live TV feature lets you effectively pause a TV program you're watching. When you're ready to resume watching, just press the Play button.

To use this feature the recorder must be connected to your TV using a SCART cable, and the *AV Link* setting (page 126) should be set to *This Recorder Only*.

Not all TVs support this feature. Check the instructions that came with your TV if you're not sure.

Important

- Pause Live TV will not work as expected when watching TV via an external component such as a VCR or digital tuner. It only works with the channel selected on the TV.

1 PAUSE LIVE TV **Start recording the current TV channel.**

Recording continues with playback paused.

- Note that it may take up to 10 seconds for recording to start.

2 PLAY **Press to start playback.**

You can also use the scan buttons (◄◄/►►), pause (**II PAUSE**) and stop (■ **STOP**)—all without affecting the recording.

3 STOP REC **Press to stop the recording.**

Tip

- You can press **PAUSE LIVE TV** while the recorder is in standby to switch on and immediately start recording. After pressing **PAUSE LIVE TV**, it will take at least 10 seconds for the picture to change (during this time, all controls except the power button are inoperative).
- Please note that you can't record from another component (VCR, etc.) that is connected by a SCART cable to the **AV2/(INPUT 1/DECODER)** connector using the Pause Live TV feature.

Setting a timer recording

ALL

Using the timer recording features you can program up to 32 timer recordings up to a month in advance. Timer recording programs can be set to record just once, every day, or every week.

There are two ways to program a timer recording; using the GUIDE Plus+ system (see *The Schedule Area* on page 43) or using the Easy Timer Recording feature (see *Easy Timer Recording* below).

You can set the recording quality for your timer recording in the same way as for a regular recording, but with the added option of an **AUTO** mode, which maximizes the recording quality for the space available on the disc (if recording to DVD), or to fit on to a blank DVD disc (if recording to HDD).

You can set timer recordings to record to a recordable DVD or to the hard disk drive. For regular (daily or weekly) HDD timer recordings that you don't need to keep, you can use the Auto Replace Recording feature to automatically replace the previous timer recording with the new one. Note that when you use this feature, the previous recording made on that timer program will be replaced by the next one, regardless of whether you have watched it yet or not.

You can also set the recorder so that it will adjust the recording quality to try and fit the recording on to the disc if it would not otherwise fit at the recording quality you set (see *Optimized Rec* on page 123 for more on this).

Finally, if you set a timer recording to record to DVD but there isn't a recordable DVD loaded at the time of the recording, the Recovery Recording feature will automatically record the program to the HDD for you.

This recorder is compatible with VPS (Video Programming System) and PDC (Program Delivery Control) systems used by many TV stations to ensure that a timer recording catches the whole program even when the program is not running to schedule. Up to eight timer programs can be set with VPS/PDC on.

Important

- A timer recording can't be set if there are already 32 timer programs waiting to be recorded.
- Timer recording will not start if:
  – The recorder is already recording.
  – A disc is being initialized, finalized or unfinalized.
- Timer recording will start when the operation preventing timer recording has finished.
- The timer indicator (◴) lights in the front panel display when the timer is active. If the indicator is blinking it means that (for a DVD timer recording) there is no disc loaded, or the disc loaded is not recordable (for an HDD timer recording it means that the HDD is not recordable).
- Approximately two minutes before a timer recording is set to start, the recorder will go into timer recording standby. In timer recording standby you cannot use some functions.

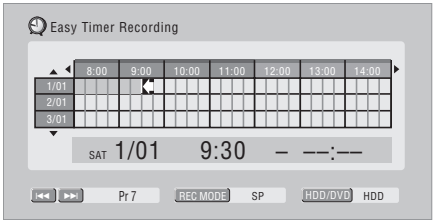
- The maximum length for timer recordings made to the HDD is 24 hours. However, because one title (HDD) is limited to 12 hours, recordings over 12 hours will be spread over two titles. Note that there will be a break in the recording of a few seconds between titles.
- VPS/PDC may not work with all broadcast stations in your country/area. Check with the stations for compatibility.
- The hours between 3:00 and 5:00 in the morning are used by the GUIDE Plus+ system to download program information. During these times, VPS/PDC may not work reliably; leave VPS/PDC off if you set a timer recording for these times.

Easy Timer Recording

As the name suggests, Easy Timer Recording makes setting up a timer recording as simple as possible.[1]

1 HOME MENU **Select 'Easy Timer' from the Home Menu.**

2 PREV NEXT **Set the TV channel to record.**



3 SHIFT + REC MODE **Set the recording quality.**

- *DVD recording:* The **AUTO** option automatically sets the best recording quality for the space available on the disc loaded at the time of recording.
- *HDD recording:* The **AUTO** option automatically sets the best recording quality that would fit on to a blank DVD disc.

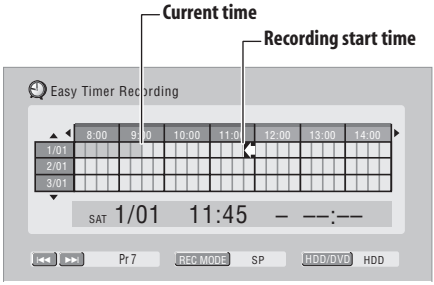
4 HDD/DVD **Select the HDD or DVD for recording.**

Note

1. You can't use VPS/PDC with Easy Timer Recording. Set a scheduled recording using the GUIDE Plus+ system if you want to use VPS/PDC.

5 Move the cursor to the recording start date and time on the grid.

- You can move the cursor forward or back an hour at a time using the ◄◄ and ►► buttons.



Each row of the grid is one day (you can set the timer recording for up to a month in advance). Each column is a 15 minute interval.

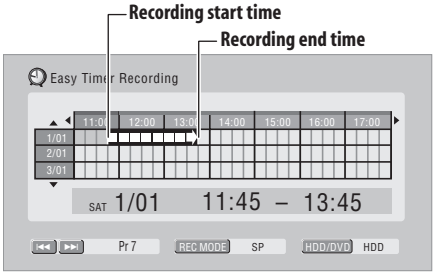
The darker area represents time that has already passed and can't therefore be selected. The lighter area is time that's available.

6 Set the start time.

The start date and time is displayed in the middle of the screen.

- You can go back and reset the start time if you need to by pressing **RETURN**.

7 Move the cursor to the recording end time on the grid.



As you move the cursor around the grid, an arrow stretches from the start time to the current cursor position, representing the length of the recording. A recording of up to six hours can be set.

8 Set the end time.

9 Select 'Yes' to set the timer recording and exit, or 'No' to go back to the Easy Timer Recording screen.

- You can check the timer recording details you just set from the Schedule Area in the GUIDE Plus system; see *The Schedule Area* on page 43.

Extending a timer recording in progress

You can extend a timer recording beyond the programmed end time. This can be useful if a broadcast program overruns, for example.

Canceling or extending the timer

1 Press and hold for three seconds during a timer recording.

Recording continues, but the timer indicator disappears from the front panel display indicating that the timer has been canceled.

2 Press repeatedly to extend recording in 30 minute blocks.

Stopping a timer recording

1 Press during a timer recording.

2 Select 'Yes' to confirm.

Preventing use of the recorder before a timer recording (child lock)

You can make all the front panel and remote control buttons inoperative using the child lock feature. This is useful when you set a timer recording and want to make sure that the timer settings are not changed before recording has finished.

1 If the recorder is on, switch it into standby.

2 [Front panel]Press and hold for three seconds to lock the controls.

The front panel display briefly shows **LOCK**. If any buttons are pressed on the remote or front panel, **LOCK** is briefly displayed again.

- To unlock the recorder, press and hold ■ **STOP** on the front panel (while the recorder is stopped) for three seconds until the display shows **UNLOCK**.

Timer recording FAQ

Frequently Asked Questions

- *Even though the timer is set, the recorder doesn't start recording!*

  Check that the disc loaded or HDD is recordable, not locked (see *Lock Disc* on page 109), and that there are fewer than 99/999 titles already on the DVD/HDD.

- *The recorder won't let me enter a timer program! Why not?*

  You can't enter a timer program if the clock isn't set.

- *What happens when two or more timer programs overlap?*

  Basically, the program with the earlier recording start time has priority. However, the recorder will start recording the program with the later start time after the earlier program is finished. If two programs have the same times (but different channels, for example), the program set most recently takes priority.

  If VPS/PDC is active for two timer programs that are programmed to start at the same time, then the program that actually starts first takes priority.

Simultaneous recording and playback (Chase Play)

HDD

Chase Play allows you to watch a recording that is still in progress from the start, without having to wait until the recording has finished (i.e., playback is 'chasing' the recording).

In fact, you're not just limited to watching the recording in progress. You can watch anything else already on the HDD (or on a DVD if you're recording to the HDD) by selecting it from the Disc Navigator screen (see *Using the Disc Navigator with recordable discs and the HDD* on page 72).

- PLAY ► **Press during recording to start playback from the beginning of the current recording[1].**

- DISC NAVIGATOR **Press during recording to select another title to play.**

You can use all the usual playback controls, such as pause, slow-motion play, scan and skip.

- To stop playback, press ■ **STOP** (recording will continue).
- To stop recording, press **STOP REC** (playback will continue).
- During recording or in timer recording standby, you can't play an HDD title, DVD or Video CD/Super VCD disc if the Input Line System setting doesn't match the TV line system of the disc/HDD title (see also *Additional information about the TV system settings* on page 127).

Also, during simultaneous recording and playback, if the TV line system of the playback track/title changes then playback will automatically stop.

Recording from an external component

DVD (VR) DVD (Video) DVD+R DVD+RW DVD-RAM

HDD

You can record from an external component, such as a camcorder or VCR, connected to one of the recorder's external inputs.

1 Make sure that the component you want to record from is connected properly to the DVD recorder.

See Chapter 2 (*Connecting up*) for connection options.

2 INPUT SELECT **Press repeatedly to select one of the external inputs to record from.**

The current input is shown on-screen and in the front panel display:

- **AV2/L1** – Input 1[2]
- **L2** – Input 2 (front panel)

Check that the **Audio In** settings for **External Audio** and **Bilingual Recording** are as you want them (see *Audio In* on page 120).

- If the aspect ratio is distorted (squashed or stretched), adjust on the source component or your TV before recording.

Note

1.You can't start playback immediately after recording starts. Simultaneous playback and recording doesn't work while copying or backing up.

2.This cannot be selected if **AV2/L1 In** is set to **Decoder** (see *AV2/L1 In* on page 119).

3 SHIFT + REC MODE **Set the recording quality.**

- See *Setting the picture quality/recording time* on page 56 for detailed information.

4 HDD/DVD **Select the HDD or DVD for recording.**

5 REC **Press to start recording.**

- If your source is copy-protected using Copy Guard, you will not be able to record it. See *Restrictions on video recording* on page 54 for more details.

Playing your recordings on other DVD players

DVD (VR) DVD (Video) DVD+R DVD+RW

Most regular DVD players can play finalized discs recorded in Video mode and DVD+R discs. A number of players (including many Pioneer models) can also play DVD-RW discs recorded in VR mode, finalized or not. Most players will not play VR mode DVD-R discs, although some DVD-ROM drives and DVD recorders may be able to (finalization might be necessary). Check the manual that came with the player to check what kinds of discs it will play.

When you finalize a Video mode or DVD+R disc, a title menu is created from which you can select titles when you play the disc. There are a number of different styles of title menu to choose from to suit the content of the disc.

All the title menus are navigated in the usual way, pressing **MENU** or **TOP MENU** to display the menu, then using the ⬆/⬇/⬅/➡ followed by **ENTER** to select titles and start playback.

Finalizing a disc

DVD (VR) DVD (Video) DVD+R DVD+RW

Finalizing 'fixes' the recordings on the disc so that it can be played on a regular DVD player or computer equipped with a suitable DVD-ROM drive.[1]

Note that the disc name will appear in the title menu after you finalize a disc. Make sure the disc name is as you want it before you finalize the disc as it can't be changed afterwards. If you want to rename the disc, see *Input Disc Name* on page 109 before starting the steps below.

DVD+RW discs don't generally need finalizing. However, if you want a title menu to appear when you play the disc, then you will need to finalize. When using a DVD+RW, you can still record and edit even after finalizing. although the title menu will disappear if you do so. Finalize the disc again to generate a new title menu.

Important

- Once you've finalized a Video mode or DVD+R disc, you can't edit or record anything else on that disc. However, the finalization on a DVD-RW disc maybe 'undone'; see *Undo Finalize* on page 110 for how to do this.

Note

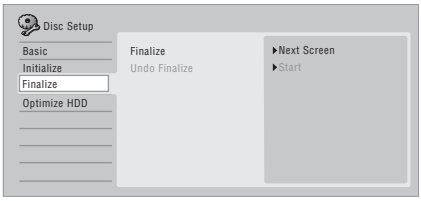
1. If the TV line system of the disc is different to the current setting of the recorder, you will not be able to finalize the disc. See *Additional information about the TV system settings* on page 127 for how to change the recorder's setting.

- A VR mode DVD-R/-RW (excluding DVD-R DL) disc can still be recorded and edited on this recorder even after finalizing.
- Video mode DVD-R DL discs and DVD+R DL discs must be finalized in order to play in other recorders/players. Note however that some recorders/players will not play even finalized dual-layer discs.

1 Load the disc you want to finalize.
Make sure that the recorder is stopped before proceeding.

2 Select 'Disc Setup' from the Home Menu.

3 Select 'Finalize' > 'Finalize' > 'Next Screen'.



4 For Video mode and DVD+R/+RW discs only, select a title menu style, then select 'Yes' to start finalization or 'No' to cancel.
The menu you select will be the one that appears when the 'top menu' (or 'menu' for a DVD+R/+RW) is selected on any DVD player.

- Discs recorded partially or fully on the Pioneer DVR-7000 DVD recorder do not support this feature. These discs will have only a text title menu when finalized on this recorder.

5 The recorder will now start finalizing the disc.
During finalization:

- If the finalization process of a DVD-RW or DVD+R/+RW disc is going to take more than around four minutes, you can press **ENTER** to cancel. Around four minutes before completion, the option to cancel disappears.
- You can't cancel the finalization of a VR mode DVD-R disc.
- How long finalization takes depends on the type of disc, how much is recorded on the disc and the number of titles on the disc. A disc recorded in VR mode can take up to one hour to finalize. Video mode DVD-R/-RW and DVD+R/+RW discs can take up to 20 minutes.

Initializing recordable DVD discs

DVD-R DVD-RW DVD+RW DVD-RAM

DVD-R/-RW discs can be initialized for either Video mode recording or VR mode recording.[1]

When you first load a blank DVD-RW or DVD+RW disc, the recorder initializes it for recording automatically. By default, blank DVD-RW discs are initialized for VR mode recording. See *DVD-RW Auto Init.* on page 124 if you want to change the default to Video mode.

DVD-R discs are ready for Video mode recordings out of the box; if you want to use a DVD-R for VR mode recording, you must initialize it before recording anything on the disc.

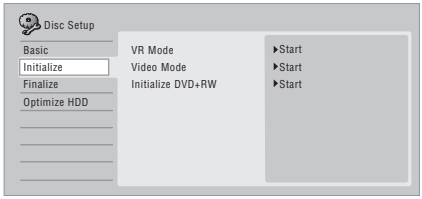
DVD+RW and DVD-RAM discs can also be initialized in order to erase the contents of the disc.

Important

- Initializing a DVD-RW, DVD+RW or DVD-RAM disc will erase everything recorded on it. Make sure there is nothing on the disc that you want to keep!
- You may not be able to re-initialize a DVD-RW disc in a different format if it was originally initialized on an older DVD recorder.
- Once initialized for VR mode recording, you can't re-initialize a DVD-R back to Video mode.

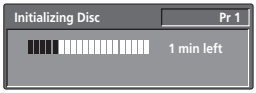
1 HOME MENU **Select 'Disc Setup' from the Home Menu.**

2 ENTER **Select 'Initialize' > 'Video Mode', 'VR Mode' or 'Initialize DVD+RW'.**



3 ENTER **Select 'Start'.**

It takes about 30 seconds to initialize the disc (except DVD-RAM discs, which can take up to 1 hour).



Note

1.If a disc was previously finalized on an older DVD recorder, you may not be able to re-initialize and/or initialize it for Video mode recording.

Chapter 7
Playback

Introduction

Most of the features described in this chapter make use of on-screen displays. Navigate these using the cursor buttons and **ENTER**. To go back one level from any screen, use the **RETURN** button.

Remember also that the button guide at the bottom of every screen shows which buttons do what.

Many of the functions covered in this chapter apply to the HDD, DVD discs, Video CDs, Super VCDs, WMA/MP3/DivX discs and CDs, although the exact operation of some varies slightly with the kind of disc loaded.

- Many functions are not available when a Video CD is playing in PBC mode. Stop playback, then press ►►I for non-PBC playback.
- For discs that contain JPEG picture files, see *The PhotoViewer* on page 107.

Basic playback

ALL

This section shows you how to use your recorder for playback of discs (DVD, CD, etc.), and for playback of video from the HDD.

Important

- Throughout this manual, the term 'DVD' means any kind of playable or recordable DVD. If a function is specific to a particular kind of DVD disc, it is specified.
- Some DVD-Video, DVD+R and DVD+RW discs don't allow certain playback controls to operate at certain points in the disc. This is not a malfunction.

HDD/DVD

1 Select the HDD or DVD for playback.

If playing video from the HDD, skip to step **5** below.

Select DVD for any kind of disc playback.

▲ OPEN/CLOSE

2 Load a disc.

Load a disc with the label side facing up, using the disc tray guide to align the disc (if you're loading a double-sided DVD-Video disc, load it with the side you want to play face down).

- If you want to play a DTS audio CD, please first read the note on page 70.

3 PLAY **Start playback.**

- If you're playing a DVD-Video or Video CD, a disc menu may appear when you start playback. Use the ↑/↓/←/→ buttons and **ENTER** to navigate DVD disc menus, and the number buttons and **ENTER** for Video CD menus.
- When playing video from the HDD, playback will automatically stop after the end of a title is reached.
- There may be a slight pause when playback switches from the first to the second layer of a dual-layer disc.
- See the following sections for more details on playing specific kinds of discs.

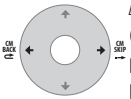
4 STOP **Press to stop playback.**

5 When you've finished using the recorder, eject the disc and switch the recorder back into standby.

Playing DVD discs

The table below shows the basic playback controls for DVD-Video, and recordable DVD discs.

PLAY	Press to start playback. If **RESUME** is displayed on-screen, playback starts from the place last stopped.
STOP	Press to stop playback. You can resume playback from the same point by pressing ► **PLAY**. (Press ■ **STOP** again to cancel the resume function.)
PAUSE	Pauses playback, or restarts playback when paused.
◄◄ ►►	Press to start scanning. Press repeatedly to increase the scanning speed.
PREV NEXT	Press to skip to previous/next chapter/title. (During playback you can also use the front panel **CH +/–** buttons.) *DVD+R/DVD+RW only:* I◄◄ **PREV** may not always skip to the previous title.
ENTER	*Except VR mode:* During playback, enter a chapter number then press **ENTER** to skip directly to that chapter within the currently playing title. On some discs, you can also use the number buttons to select numbered items in the disc menu. *VR mode only:* During playback, enter a title number then press **ENTER**. *All:* Press **CLEAR** to clear a number entry and start again.



DVD-R/-RW, DVD-RAM only: (Commercial back/skip) Each press skips backward/forward progressively up to a maximum of ten minutes forward or three minutes back.

While paused, press and hold to start slow-motion playback. Press repeatedly to change the playback speed.
While paused, press to advance a single frame in either direction.

Press to display the menu of a DVD-Video disc. (DVD+R/+RW discs finalized on this recorder will display the Disc Navigator. Press **MENU** to display the disc menu.)

Use the cursor buttons to navigate DVD-Video disc menus; press **ENTER** to select items.

Press to return to the previous level of a DVD-Video disc menu.

Playing from the HDD

The table below shows the basic playback controls when playing video recorded on the hard disk (HDD).

Press to start playback.
If **RESUME** is displayed on-screen, playback starts from the place last stopped. Playback automatically stops after the end of a title is reached.

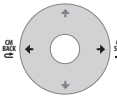
Press to stop playback.
You can resume playback from the same point by pressing ► **PLAY**. (Press ■ **STOP** again to cancel the resume function.)

Pauses playback, or restarts playback when paused.

Press to start scanning. Press repeatedly to increase the scanning speed.

Press to skip to previous/next chapter/title. (During playback you can also use the front panel **CH +/–** buttons.)

During playback, enter a title number then press **ENTER** to skip directly to that title.
Press **CLEAR** to clear a number entry and start again.



(Commercial back/skip) Each press skips backward/forward progressively up to a maximum of ten minutes forward or three minutes back.

While paused, press and hold to start slow-motion playback. Press repeatedly to change the playback speed.
While paused, press to advance a single frame in either direction.

Playing CDs and WMA/MP3 discs

The table below shows the basic playback controls for audio CDs[1], and WMA/MP3 files.

PLAY ►	Press to start playback.
STOP ■	Press to stop playback.
PAUSE ❚❚	Pauses playback, or restarts playback when paused.
◄◄ ►►	*Except WMA:* Press to start scanning. Press again to increase the scanning speed. (There are two scan speeds; the current scan speed is shown on-screen.)
PREV ◄◄ NEXT ►►I	Press to skip to previous/next track (or folder for WMA/MP3 disc). (During playback you can also use the front panel **CH +/–** buttons.)
ENTER	During playback, enter a track number then press **ENTER** to skip directly to that track. Press **CLEAR** to clear a number entry and start again.

Playing Video CD/Super VCDs

The table below shows the basic playback controls for Video CD/Super VCDs.

Some discs feature Playback Control (PBC for short) menus. These discs show PBC in the display when you load them and display a menu on-screen from where you can select what to watch.[2]

PLAY ►	Press to start playback. *Video CD only:* If **RESUME** is displayed on-screen, playback starts from the place last stopped.
STOP ■	Press to stop playback. *Video CD only:* You can resume playback from the same point by pressing ► **PLAY**. (Press ■ **STOP** again to cancel the resume function.)
PAUSE ❚❚	Pauses playback, or restarts playback when paused.
◄◄ ►►	Press to start scanning. Press repeatedly to increase the scanning speed.
PREV ◄◄ NEXT ►►I	Press to skip to previous/next track. When a PBC menu is displayed, press to display the previous/next page. (During playback you can also use the front panel **CH +/–** buttons.)

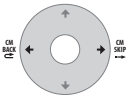
Note

1 If you want to play a DTS audio CD, make sure the recorder is connected to a DTS-compatible amp/receiver with a digital connection. Noise will be output through the analog outputs. Also make sure that **Stereo** is selected using the **AUDIO** (**SHIFT** + **4**) button (see *Switching audio channels* on page 78).

2 When playing in PBC mode, some playback features, such as search, repeat and program play are not available. You can play a PBC Video CD/Super VCD in non-PBC mode by pressing ►►I to start playback instead of ► **PLAY**.

During playback, enter a track number then press **ENTER** to skip directly to that track.
Press **CLEAR** to clear a number entry and start again.
While a PBC menu screen is displayed, use to select numbered menu items.

ENTER



Video CD only: Each press skips backward/forward progressively up to a maximum of ten minutes forward or three minutes back. Note that this function doesn't work when playing in PBC mode.

I►/II►

While paused, press and hold to start slow-motion playback. Press repeatedly to change the playback speed (forward only). While paused, press to advance a single frame (forward only).

RETURN

Press to display the disc menu of a Video CD/Super VCD playing in PBC mode.

Playing DivX video files

The table below shows the basic playback controls for DivX video files.

PLAY

Press to start playback.
If **RESUME** is displayed on-screen, playback starts from the place last stopped. Playback of titles (DivX files) proceeds in alphabetical order.

STOP

Press to stop playback.
You can resume playback from the same point by pressing ► **PLAY**. (Press ■ **STOP** again to cancel the resume function.)

PAUSE

Pauses playback, or restarts playback when paused.

Press to start scanning. Press repeatedly to increase the scanning speed.

PREV NEXT

Press to skip to previous/next title. (During playback you can also use the front panel **CH +/–** buttons.)

I►/II►

While paused, press to advance one frame. Press and hold to start slow motion playback (press repeatedly to change the slow motion play speed).

SHIFT + AUDIO

Press to display the playback audio type; press repeatedly to change the playback audio type.

SHIFT + SUBTITLE

Press to display subtitle information; press repeatedly to change subtitles.

Using the Disc Navigator to browse the contents of a disc

Use the Disc Navigator to browse the contents of a disc and start playback.

Using the Disc Navigator with recordable discs and the HDD

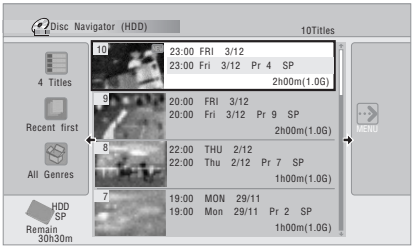
DVD-R DVD-RW DVD+R DVD+RW DVD-RAM HDD

You can use the Disc Navigator to browse and edit video on recordable DVDs and the HDD, and to view information on titles.

See also *Editing* on page 81 for more on editing recordable discs.

1 HDD/DVD **Select the hard disk drive or DVD.**

2 DISC NAVIGATOR **Open the Disc Navigator.**



- You can also access the Disc Navigator from the Home Menu.

3 **Browse the list of titles.**

- Use the I◄◄/►►I buttons to display the previous/next page of titles.
- To change the thumbnail picture displayed for a title see *Set Thumbnail* on page 85.
- For HDD recordings, you should be able to see a thumbnail title digest. If it doesn't display, set Set Preview to **Normal**. See *Set Preview* on page 127.

4 ENTER **Play the highlighted title.**

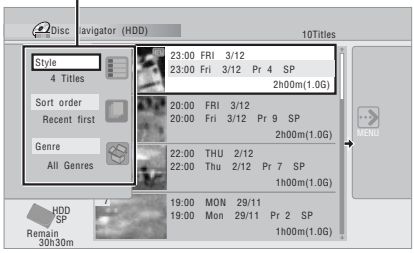
- You can also select **Play** from the command menu options.

Changing the display style of the Disc Navigator

You can choose to display titles in the Disc Navigator in various different ways, sorted alphabetically, by recording date, by genre, and so on. You can also choose whether to display four or eight titles on the screen at the same time.

1 **Display the View Options panel.**

The View Options panel



2 ENTER **Choose 'Style', 'Sort order' or 'Genre', then press ENTER to see the available view options.**

- **Style** – Select four or eight titles per screen view
- **Sort order** – Sort by date (most recent first), unwatched first, title name or recording date (oldest first)

- **Genre** – Display all genres or just a selected genre

3 Choose a view option, then press ENTER.

The title list display is updated according to the new display preferences.

Using the Disc Navigator with playback-only discs

DVD-Video CD Video CD SuperVCD WMA/MP3 DivX

1 Display the Home Menu.

2 Select 'Disc Navigator'.

Alternatively, for a CD, Video CD, Super VCD or WMA/MP3/DivX disc, you can press **DISC NAVIGATOR**, which takes you straight to the Disc Navigator screen.

3 Select what you want to play.

Depending on the type of disc you have loaded, the Disc Navigator looks slightly different, but they are all navigated in the same way.

The screen below shows a WMA/MP3/DivX disc. Navigate to the folder, or the track/title within a folder that you want to play.

Playback starts after you press **ENTER**.

- For discs that contain CD-Audio tracks and WMA/MP3 tracks or DivX titles, you can switch the playback area between **CD**, **WMA/MP3** and **DivX**. This can only be done while the disc is stopped.

Scanning discs

ALL *(except WMA)*

You can scan discs at various speeds, forwards or backward.[1]

1 During playback, start reverse or forward scanning.

- The scanning speed is shown on-screen.

Note

1 • Only analog audio is output when scanning audio CDs.
• No subtitles are displayed when scanning DVDs and DivX titles.
• Analog and digital sound is output when scanning DVDs and DivX titles with Dolby Digital or Linear PCM sound on forward **SCAN 1** (Linear PCM is output from the optical digital output, Except during chase playback and simultaneous recording/playback). No sound is output when using other scan speeds.
• No sound is output when scanning from the HDD, except on forward **SCAN 1**. (Linear PCM is output from the optical digital output during forward **SCAN 1**).
• Depending on the disc, normal playback may automatically resume when a new chapter is reached on a DVD disc.

2 ◄◄ ►► Press repeatedly to change the scanning speed.
There are four scanning speeds available when playing HDD video, a DVD or a DivX title. Reverse playback is also possible with HDD and DVD video.[1]

There are two scanning speeds for other types of disc.

3 PLAY ► Resume normal playback.

Playing in slow motion

DVD HDD Video CD Super VCD DivX

You can play video at various slow motion speeds. DVDs and video on the HDD can be played in slow motion in either direction, while Video CDs/Super VCDs and DivX titles can only be played forwards in slow motion.

There is no sound when playing in slow motion.

1 PAUSE ❚❚ Pause playback.

2 ◄II/◄I I►/II► Press and hold to start slow motion reverse or forward play.

3 ◄II/◄I I►/II► Press repeatedly to change the slow motion speed.
The current playback speed is indicated on-screen.

4 PLAY ► Resume normal playback.

Frame advance/frame reverse

DVD HDD Video CD Super VCD DivX

You can advance or back up video on a DVD disc[2] or the HDD frame-by-frame.

With Video CDs/Super VCDs and DivX titles, you can only use frame advance.

1 PAUSE ❚❚ Pause playback.

2 ◄II/◄I I►/II► Back up or advance one frame with each press.

3 PLAY ► Resume normal playback.

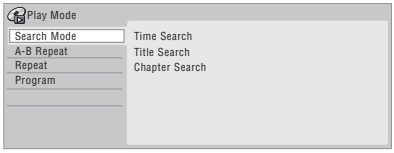
The Play Mode menu

ALL

The Play Mode menu gives you access to search functions, repeat and program play functions.

Note
1 Reverse playback may not be smooth.
2 Depending on the disc, normal playback may automatically resume when a new chapter is reached.

Press SHIFT + PLAY MODE (9) to display the Play Mode menu.



- You can also access the Play Mode menu from the Home Menu (press **HOME MENU**).
- To exit the Play Mode menu, press **HOME MENU** or **PLAY MODE** (**SHIFT** + **9**).

Search Mode

ALL

The Search Mode feature lets you start playback from a specified point in a disc by time[1] or by title/chapter/folder/track number.

1 Select 'Search mode' from the Play Mode menu, then choose a search option.

The available search options depend on the type of disc.

2 Enter a title/chapter/folder/track number or a search time.

Time Search (HDD, DVD): For example, for 25 minutes into the current title, press **2, 5, 0, 0**. For 1 hour and 15 minutes and 20 seconds into the title, press **1**, **1**, **5**, **2**, **0**.

Time Search (Video CD): For example, for 2 minutes and 30 seconds into the current track, press **2**, **3**, **0**.

Title/Chapter/Folder/Track Search: For example, for track 6, press **6**.

3 Start playback.

A-B Repeat

DVD HDD CD Video CD DivX

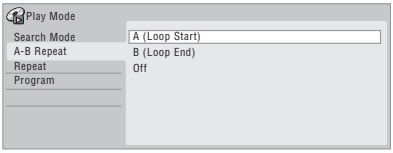
The A-B Repeat function allows you to specify two points (A and B) within a track or title that form a loop which is played over and over.[2]

1 During playback, select 'A-B Repeat' from the Play Mode menu.

Note

1 When using time search, playback may occasionally start slightly before or after the time you input.
2 If you switch camera angles on a DVD during A-B repeat play, A-B repeat is canceled.

2 (ENTER) With 'A (Loop Start)' highlighted, press at the point you want the loop to start.



3 (ENTER) With 'B (Loop End)' highlighted, press at the point you want the loop to end.

Playback immediately jumps back to the start point and plays the loop round and round.

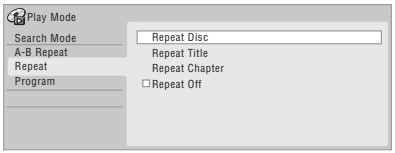
- When playing a DVD-Video/Video mode DVD, or from the HDD, the start and end points of the loop must be in the same title.
- To resume normal playback, select **Off** from the A-B Repeat menu, or press **CLEAR** if no menu OSD (such as the Play Mode menu) is displayed.

Repeat play

ALL

There are various repeat play options, depending on the kind of disc loaded, or if you're using the HDD for playback. It's also possible to use repeat play together with program play to repeat the tracks/chapters in the program list (see *Program play* below).[1]

1 Select 'Repeat' from the Play Mode menu, then choose a repeat play mode.



- To resume normal playback, select **Repeat Off** from the Repeat Play menu, or press **CLEAR** if no menu OSD (such as the Play Mode menu) is displayed.

Program play

HDD DVD-Video CD Video CD Super VCD WMA/MP3

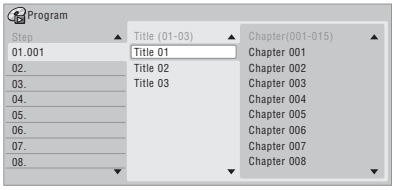
This feature lets you program the play order of titles/chapters[2]/folders/tracks on a disc or the HDD.

1 Select 'Program' from the Play Mode menu, then 'Input/Edit Program'.

The Input/Edit Program screen varies according to the disc type. Below is the DVD input screen.

Note

1 If you switch the camera angle during repeat play of a DVD-Video disc, repeat play is canceled.
2 When playing a program list of DVD-Video chapters, chapters not included in the program list may be sometimes be played, depending on the disc.



2 Select a title, chapter, folder or track for the current step in the program list.

After pressing **ENTER** to add the title/chapter/folder/track, the step number automatically moves down one.

- To insert a step into the program list, highlight the step number where you want to insert another step, then select a chapter/title/folder/track as usual. After pressing **ENTER**, all the subsequent steps move down one.
- To delete a step from the program list, highlight the step you want to delete, then press **CLEAR**.

3 Repeat step 2 to build up a program list.

A program list can contain up to 24 titles/chapters/folders/tracks.

4 Play the program list.

Program play remains active until you cancel program play, erase the program list, eject the disc or switch off the recorder.

Tip

- To save your program list and exit the program edit screen without starting playback, press **HOME MENU** or **PLAY MODE** (**SHIFT** + **9**).
- During program play, press ►►I to skip to the next program step.
- To repeat play the program list, select **Program Repeat** from the Repeat Play Mode menu (see *Repeat play* on page 76).
- Press **CLEAR** during playback to switch off program play (if no menu OSD, such as the Disc Navigator, is displayed). Press while stopped to erase the program list.
- From the Program menu you can also:
  Start Program Play – Starts playback of a saved program list
  Cancel Program Play – Turns off program play, but does not erase the program list
  Erase Program List – Erases the program list and turns off program play

Displaying and switching subtitles

DVD-Video DivX

Some DVD and DivX discs have subtitles in one or more languages; the disc box will usually tell you which subtitle languages are available. You can switch subtitle language during playback.[1]

Note

1 • Some discs only allow you to change subtitle language from the disc menu. Press **MENU** or **TOP MENU** to access.
• To set subtitle preferences, see *Subtitle Language* on page 122.

Check the disc packaging for details of the subtitle options.

• SHIFT + SUBTITLE (5) **Select/change the subtitle language.**
The current subtitle language is shown on-screen and in the front panel display.

- To switch off subtitles, press **SUBTITLE** (**SHIFT** + **5**) then **CLEAR**.

Switching DVD and DivX soundtracks

DVD-Video DivX

When playing a DVD disc or DivX title recorded with two or more soundtracks (often in different languages), you can switch the soundtrack during playback.[1]

Check the disc packaging for details of the soundtrack options.

• SHIFT + AUDIO (4) **Change the audio soundtrack.**
The current audio language is shown on-screen and in the front panel display.

- The sound may drop out for a few seconds when switching soundtracks.
- Some discs feature both Dolby Digital and DTS soundtracks. There is no analog audio output when DTS is selected. To listen to the DTS soundtrack, connect this recorder to a DTS decoder or AV amp/receiver with built-in DTS decoder via the digital output. See *Connecting to an AV amplifier/receiver* on page 22 for connection details.

Switching audio channels

DVD (VR) DVD-RAM HDD CD Video CD Super VCD WMA/MP3

For HDD[2] and VR mode content recorded with bilingual audio, you can switch between left (**L**) channel, right (**R**) channel, or both (**L+R**).[3]

When playing Video CDs and audio CDs you can switch between stereo, just the left channel or just the right channel.

Some Super VCDs have two soundtracks. With these discs you can switch between the two soundtracks as well as individual channels in each.

• SHIFT + AUDIO (4) **Press repeatedly to display/switch the audio channel.**
The audio channel(s) currently playing are indicated on-screen.

Note

1 • Some discs only allow you to change audio language from the disc menu. Press **MENU** or **TOP MENU** to access.
• To set audio language preferences, see *Audio Language* on page 122.

2 Only when HDD Recording Format is set to Video Mode Off (*HDD Recording Format* on page 124).

3 When playing a Bilingual recording on a VR mode disc, if you are listening to the Dolby Digital soundtrack via the digital output, you cannot switch the audio channel. Set **Dolby Digital Out** to **Dolby Digital → PCM** (see *Dolby Digital Out* on page 120) or listen via the analog outputs if you need to switch the audio channel.

HDD DVD (VR) DVD-RAM

L+R – Both channels (default)
L – Left channel only
R – Right channel only

CD Video CD WMA/MP3

Stereo – Stereo (default)
1/L – Left channel only
2/R – Right channel only

Super VCD

1 Stereo – Soundtrack 1 / Stereo (default)
1 L – Soundtrack 1 / Left channel
1 R – Soundtrack 1 / Right channel
2 Stereo – Soundtrack 2 / Stereo
2 L – Soundtrack 2 / Left channel
2 R – Soundtrack 2 / Right channel

Switching camera angles

DVD-Video

Some DVD-Video discs feature scenes shot from two or more angles—check the disc box for details: it should be marked with a icon if it contains multi-angle scenes. When a multi-angle scene is playing, the same icon appears on screen to let you know that other angles are available (this can be switched off if you prefer—see *Angle Indicator* on page 126).

- SHIFT + ANGLE 6 **Switch the camera angle.**
  - The angle number is displayed on-screen.
  - If the disc was paused, playback starts again with the new angle.

Displaying disc information on-screen

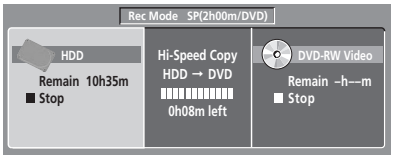
You can display various on-screen information about the disc loaded or the HDD.

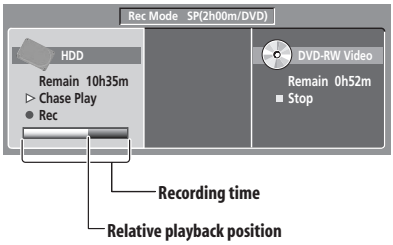
- DISPLAY **Display/change the on-screen information.**
  - Press once to show the HDD and removable disc (DVD, etc.) activity together. Press again to show the status of just the currently selected playback/recording device (HDD or removable disc).
  - To hide the information display, press **DISPLAY** repeatedly until it disappears.

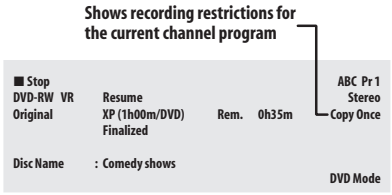
HDD and removable disc activity display

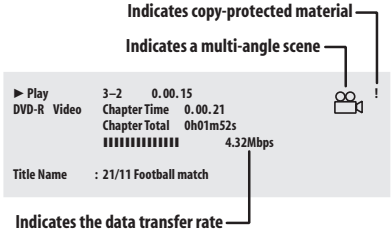
Press **DISPLAY** once to see the HDD and removable disc (DVD, etc.) activity. Use the **HDD/DVD** button to switch between the two kinds of display.

The example displays below show high-speed copying from HDD to DVD, and HDD chase playback.









Tip

- See *Switching camera angles* on page 79 for more on multi-angle scene switching.
- When using the simultaneous play and record feature, the display shows information for playback only.
- During real-time copy, the copy source playback information is displayed.
- The Video mode disc displays become the same as a DVD-Video disc once the disc is finalized.
- The total recording time figure shown in parenthesis is calculated based on a 12 cm / 4.7 GB disc at the displayed record setting.
- Recording and playback times for TV recordings are approximately 0.1 % shorter than the actual time. This is because of the slightly different frame rates of TV broadcasts versus DVD.
- The frame number is shown next to the elapsed time display when the disc is paused.
- **Copy Once** or **Can't Record** messages may appear in the stop or recording displays. These indicate that the broadcast TV program contains copy control information.

Chapter 8
Editing

Editing options

The table below shows which commands you can use with the HDD and different disc types.

	HDD	DVD-R/-RW (Video mode), DVD+R/+RW	DVD-R/-RW, DVD-RAM (VR mode)	
			Original	Play List
Create (page 83)				●
Play (page 83)	●	●	●	●
Erase (page 84)	●	●	●	●
Edit > Title Name (page 84)	●	●	●	●
Edit > Set Thumbnail (page 85)	●	●	●	●
Edit > Erase Section (page 86)	●		●	●
Edit > Divide (page 87)	●			●
Edit > Chapter Edit (page 88)	●		●	●
Edit > Set Genre (page 89)	●			
Edit > Lock (page 90)	●	●	●	
Edit > Move (page 90)				●
Edit > Combine (page 91)				●
Genre Name (page 91)	●			
Multi-Mode (page 92)	●			
Undo (page 93)		●	● *1	● *1

*1 DVD-R/-RW only

The Disc Navigator screen

The Disc Navigator screen is where you can edit video content on unfinalized Video mode and VR mode DVD-R/-RW discs, DVD+R/+RW and DVD-RAM, as well as video content on the internal hard disk drive.

Important

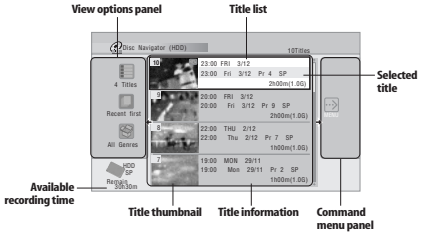
- Titles that have been recorded with a Input Line System setting different to the current setting of the recorder are shown in the Disc Navigator with a blank thumbnail image. See also *Additional information about the TV system settings* on page 127.
- During recording, if you display the Disc Navigator for the HDD, some of the titles may appear with a ⚠ mark. These titles were recorded with a Input Line System setting different to the current setting of the recorder. During recording, these titles cannot be played.

1 HDD/DVD **Select the HDD or DVD.**

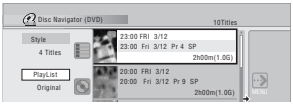
2 DISC NAVIGATOR **Display the Disc Navigator screen.**

Playback will automatically stop when you do this.

- The Disc Navigator is also accessible from the Home Menu.



- Press to display the command menu panel. Use the ↑/↓ and **ENTER** buttons to navigate the menus.
- PREV NEXT When in the title list, press to display the previous/next page if there are more titles than can be displayed.
- DISPLAY Press to change the title information displayed in the title list.
- HDD/DVD Press to switch between the HDD and DVD Disc Navigator screens.
- If you are editing a VR mode DVD-R/-RW or DVD-RAM disc you can display the Play List by selecting **Play List** from the view options panel (press ←, then select **Play List** from the view options, then **Play List**).



- Titles on the HDD marked with a NEW icon are recently recorded titles that haven't yet been played.

3 DISC NAVIGATOR **Press to exit the Disc Navigator.**

Editing accuracy

Some editing commands ask you whether you want to keep Video mode compatibility or frame accuracy (*Video Mode Compatible Editing* or *Frame Accurate Editing*).

Frame accurate editing is very precise. The edit point is accurate to the exact frame you choose. However, this accuracy is not preserved in any copy you make if you use the high-speed copy function to make a Video mode DVD.

Video mode compatible editing is less precise. The edit point you choose will only be accurate to within 0.5 to 1 second. On the other hand, these edit points will be preserved if you use high-speed copy to make a Video mode DVD or DVD+R/+RW.

HDD genres

The large capacity of the HDD means that there may be many hours of video in the recorder. To help you organize your HDD video content you can assign different genres to titles. There are 14 genres in total, including ten user-definable ones that you can name as you like.

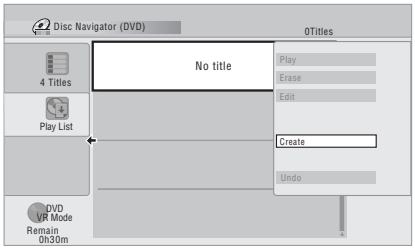
Create

DVD (VR) **DVD-RAM** *Play List only*

Use this function to create a Play List and add titles to it.

Before you can use this command, make sure that the Play List is switched on in the view options panel on the left.

1 **Select 'Create' from the command menu panel.**



2 **Select an original title to add to the Play List.**

Repeat these two steps to add as many titles as necessary to the Play List.

Play

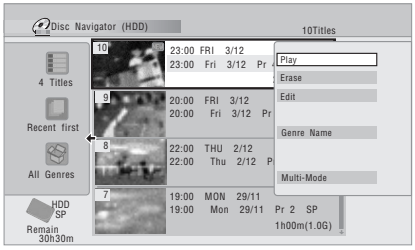
DVD (Video) **DVD (VR)** **DVD+R** **DVD+RW** **DVD-RAM** **HDD**

Use this function to start playback of a title.

1 **Highlight the title you want to play.**

2 **Select 'Play' from the command menu panel.**

Playback of the title you selected starts.



Erase

DVD (Video) DVD (VR) DVD+R DVD+RW DVD-RAM

HDD

Use this function to erase unwanted titles.

When you erase titles from the HDD or Original titles from a VR mode DVD-RW, the available recording space increases accordingly. Erasing a title from a Video mode DVD-RW or DVD+RW disc increases the available recording time only if it is the last title on the disc.[1]

Erasing Play List titles, or titles from a DVD-R (VR mode or Video mode) or DVD+R, will not result in any more free space on the disc.

1 **Highlight the title you want to erase.**

2 **Select 'Erase' from the command menu panel.**

3 **Select 'Yes' to confirm or 'No' to cancel.**

Tip

- You can erase a title quickly by pressing **CLEAR** when the title is highlighted. Confirm the edit by pressing **ENTER**.

Title Name

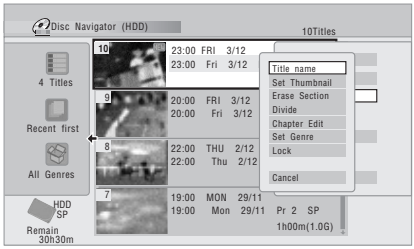
DVD (Video) DVD (VR) DVD+R DVD+RW DVD-RAM

HDD

You can give titles new names of up to 64 characters long for VR mode, DVD-RAM and HDD recordings, and up to 40 characters for Video mode recordings and DVD+R/+RW discs.

1 **Highlight the title you want to name (or rename).**

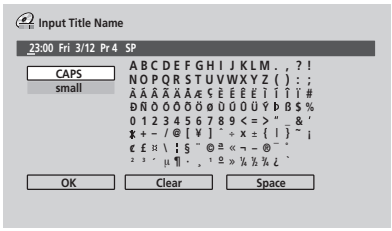
2 **Select 'Edit' > 'Title Name' from the command menu panel.**



Note

1 There may be cases where erasing a title from a DVD+R/+RW disc will result in incontiguous title numbers.

3 **Input a name for the selected title.**



- A name generated automatically by the recorder will already be in the name input section of the screen. Use the ◄◄/►► buttons to change the cursor position.
- Select **CAPS** or **small** to change to upper or lower-case, or use the **CASE SELECTION** buttons (I◄◄/►►I).
- You can also use the **CLEAR** button to delete characters directly (press and hold for two seconds to delete the whole name). For other remote control key shortcuts, see *Using the remote key shortcuts to input a name* below.
- For discs formatted on a different DVD recorder, you will see only a limited character set.

4 **Select 'OK' to enter the name and return to the main Disc Navigator screen.**

- To return to the main Disc Navigator screen without saving changes to the title name, press **RETURN**.

Using the remote key shortcuts to input a name

The table below shows the remote control key shortcuts that you can use to input characters in the name input screen. Pressing a button repeatedly cycles through the characters shown.

If you want to enter two characters in succession that are both on the same button (for example a **P** and an **R**), press ►► to advance the cursor one space manually between inputting the two characters.

Key	Characters	Key	Characters
1	. , ' ? ! – & 1	**6**	m n o 6 ö ô ò ó ø ñ
2	a b c 2 ä à á â ã æ ç	**7**	p q r s 7 $ ÿ/ß [*1]
3	d e f 3 è é ë ê	**8**	t u v 8 ü ù û ú
4	g h i 4 î ï ì í i	**9**	w x y z 9
5	j k l 5 £	**0**	0
◄◄	[cursor back]	►►	[cursor forward]
I◄◄/►►I	[change case]	**CLEAR**	[clear character]
II	<space>	■	[finish name input]
+	~ ( ) _ / : ; " ` ^ @ # * % ¥ | + = { } [ ] < >		

[*1] lower-case: ÿ; upper-case: ß

Set Thumbnail

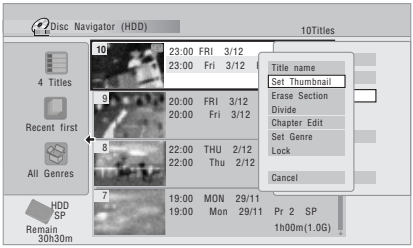
HDD DVD (Video) DVD (VR) DVD+R DVD+RW

DVD-RAM

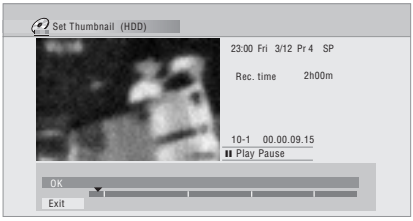
You can change the thumbnail picture that appears in the Disc Navigator for a title to any frame that appears in that title.

1 Highlight the title you want to change the thumbnail picture for.

2 Select 'Edit' > 'Set Thumbnail' from the command menu panel.
The thumbnail setting screen appears from which you can find the frame you want.



3 Use the playback controls (►, II, ◄◄, ►►, etc.) to find a suitable frame, then press ENTER to set.



You can also use the chapter and time search features (press **PLAY MODE** (**SHIFT** + **9**)), and the **CM SKIP** buttons.

4 Select 'Exit' to return to the Edit screen.

Erase Section

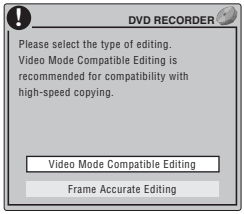
HDD DVD (VR) DVD-RAM

Using this command you can delete a part of a title, ideal for cutting out the commercial breaks in a recording made from the TV.

1 Highlight the title containing the section you want to erase.

2 Select 'Edit' > 'Erase Section' from the command menu panel.

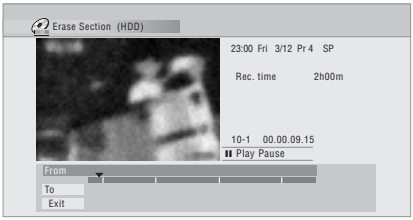
3 *HDD only:* **Select the type of edit.**


DVD RECORDER
Please select the type of editing.
Video Mode Compatible Editing is recommended for compatibility with high-speed copying.
Video Mode Compatible Editing
Frame Accurate Editing

- For more information about these options, see *Editing accuracy* on page 83.

4 Highlight 'From' then use the playback controls (►, II, ◄◄, ►►, etc.) to find the start of the section to erase, then press ENTER.

The bar at the bottom of the screen indicates the current play position in the title. After pressing **ENTER**, a marker shows the start of the section.



5 Highlight 'To' then, in the same way, find the end of the section to erase, then press ENTER.

After pressing **ENTER**, another marker indicates the end of the section, with the section itself marked in red.

6 Select 'Yes' to confirm, or 'No' to cancel,.

In the thumbnail viewer you can see a few seconds of video either side of the marked section to see how the edit will look.

- When editing VR mode Original content, you may not be able to erase very short sections (less than five seconds).

Divide

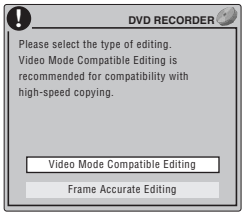
HDD DVD (VR) DVD-RAM *Play List only*

Use this command to divide a title into two. Note that once divided, the two new HDD titles cannot be recombined into one again.

1 Highlight the title you want to divide.

2 Select 'Edit' > 'Divide' from the command menu panel.

3 *HDD only:* **Select the type of edit.**

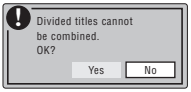

DVD RECORDER
Please select the type of editing.
Video Mode Compatible Editing is recommended for compatibility with high-speed copying.
Video Mode Compatible Editing
Frame Accurate Editing

- For more information about these options, see *Editing accuracy* on page 83.

4 Use the playback controls (►, II, ◄◄, ►►, etc.) to find the place you want to divide the title.

5 ENTER Press to divide the title at the current playback position.

6 Select 'Yes' to confirm or 'No' to cancel.



Chapter Edit

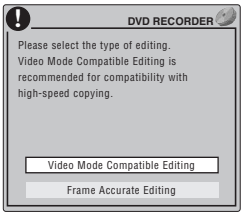
DVD (VR) DVD-RAM HDD

When editing a VR mode DVD or video on the HDD you can edit individual chapters within a title, with commands for erasing, combining and dividing.

1 Highlight the title that contains the chapters you want to edit.

2 Select 'Edit' > 'Chapter Edit' from the command menu panel.

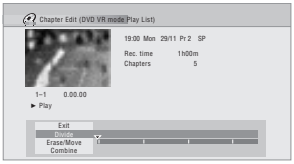
3 *HDD only:* **Select the type of edit.**


DVD RECORDER
Please select the type of editing.
Video Mode Compatible Editing is recommended for compatibility with high-speed copying.
Video Mode Compatible Editing
Frame Accurate Editing

- For more information about these options, see *Editing accuracy* on page 83.

4 Select the command you want:

- **Divide** – Divide a chapter into two or more parts: Use the playback controls (▶, ❚❚, ◀◀, ▶▶, etc.) to find the point at which you want to divide the chapter, then press **ENTER**.



You can keep dividing the chapter as many times as you wish (up to 999 chapters per DVD-R/-RW/-RAM disc or 99 chapters per HDD title).

- **Erase**[1]**/Move**[2] – Erase or move chapters: Select the chapter you want to erase/move and press **ENTER**. Select whether you want to erase or move the chapter.

  Move command only: Select the destination for the chapter, and press **ENTER**.

Note

1 When editing VR mode Original content, it may not be possible to erase chapters less than five seconds long.
2 VR mode Play List only.

- **Combine**[1] – Combine two adjacent chapters into one: Highlight the bar divider between two adjacent chapters and press **ENTER**.

5 **Select 'Exit' to get back to the main Disc Navigator screen.**

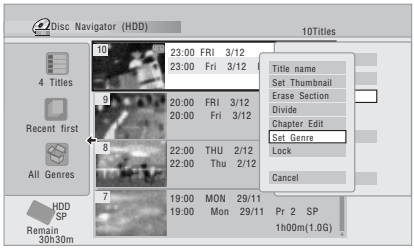
Set Genre

HDD

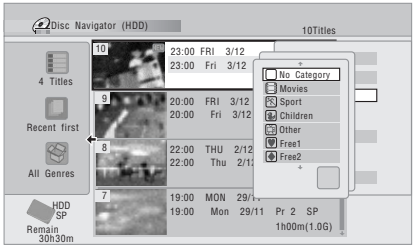
Use this command to assign a genre to a title.

1 **Highlight the title you want to assign a genre to.**

2 **Select 'Edit' > 'Set Genre' from the command menu panel.**



3 **Select a genre for the title.**



Note

1 It may not always be possible to combine two chapters, even though they are adjacent. If a chapter has been divided into three, then the middle chapter erased, it is not possible to combine the two remaining chapters into one.

Lock

HDD DVD (Video) DVD (VR) DVD+R DVD+RW

DVD-RAM

Original only

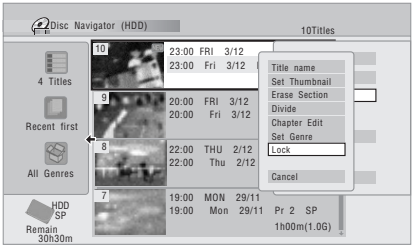
You can lock a title so that it can't be edited or erased accidentally. If you do need to edit it, you can always unlock it later.

Important

- You can't undo any edits made before changing the lock status. You also can't undo a lock/unlock command using the **Undo** option from the Disc Navigator menu.

1 Highlight the title you want to lock (or unlock).

2 Select 'Edit' > 'Lock' from the command menu panel.



An unlocked title will become locked; a locked title will be unlocked. Locked titles are shown in the Disc Navigator with a padlock icon.

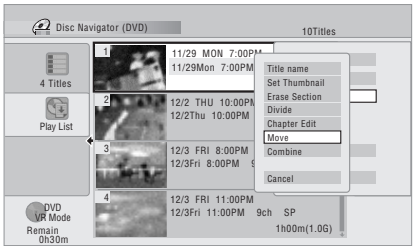
Move

DVD (VR) DVD-RAM *Play List only*

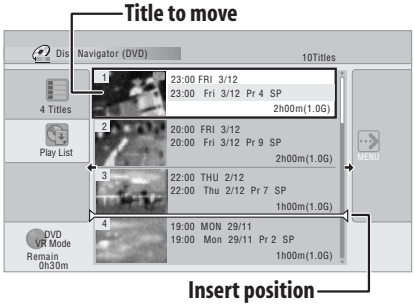
Use this function to re-arrange the playing order of Play List titles.

1 Highlight the title you want to move.

2 Select 'Edit' > 'Move' from the command menu panel.



3 Select a new position for the title.



After pressing **ENTER**, the new, updated Play List is displayed.

Combine

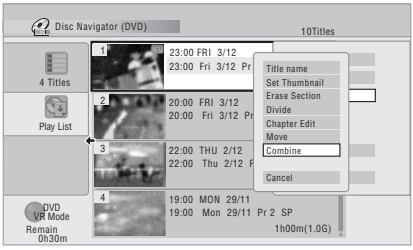
DVD (VR) DVD-RAM *Play List only*

Use this function to combine two Play List titles into one.

1 Highlight the title you want to combine.

This title will remain in the same place after combining with another title.

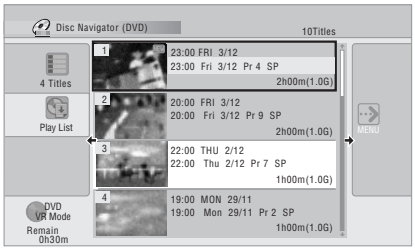
2 Select 'Edit' > 'Combine' from the command menu panel.



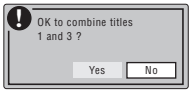
3 Select another title to combine with the first.

This title will be appended to the first title selected.

The screen below shows title 3 selected to be appended to title 1:



4 Select 'Yes' to confirm or 'No' to cancel.

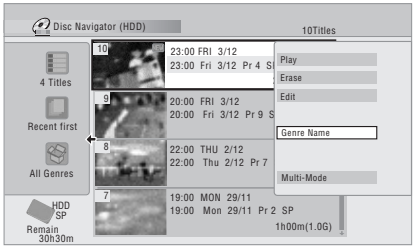


Genre Name

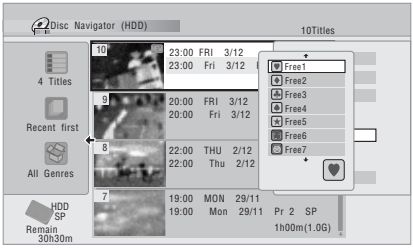
HDD

Use this command to rename one of the ten user-definable genres (**Free 1** to **Free 10**).

1 Select 'Genre Name' from the command menu panel.

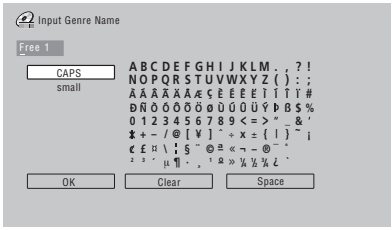


2 Select one of the user-definable genre names.



3 Input a name for the genre.

- The name can be up to 12 characters long.
- For information on remote control key short cuts, see *Using the remote key shortcuts to input a name* on page 85.



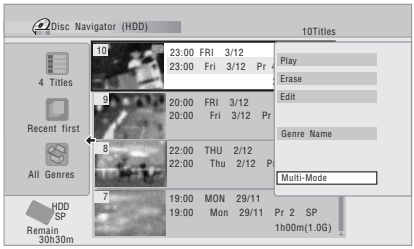
4 Select 'OK' to enter the name and exit.

Multi-Mode

HDD

Multi-Mode allows you to select several titles, then select a command that will be applied to all of them. In this way you can select multiple titles and then erase them all at once, for example.

1 Select 'Multi-Mode' from the command menu panel.

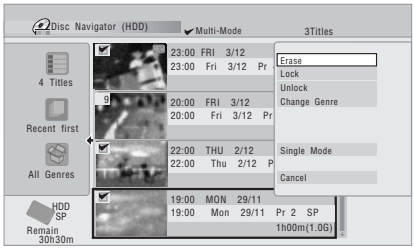


2 Select titles from the title list.

Selected titles are marked with a ☑.

3 Select the command that you want applied to all the marked titles.

For example, select **Erase** to erase all the marked titles.



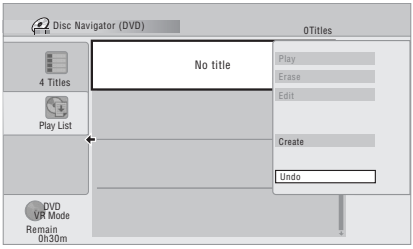
Once the command is completed, Multi-Mode is automatically exited.

Undo

DVD (Video) DVD (VR) DVD+R DVD+RW

If you make a mistake while editing, you can generally undo it. There are several levels of undo depending on the type of disc.

- **Select 'Undo' from the command menu panel.**
  - You can't undo anything after exiting the Disc Navigator screen.



Frequently asked questions

- *Why doesn't the available recording time increase when I erase titles from a VR mode DVD-R?*

  When you erase titles from a DVD-R (or DVD+R), the titles are no longer displayed, but the content remains on the disc. DVD-R/+R are write-once media; they can't be erased or rewritten.

- *I can't edit my disc!*

  You may find that as the available recording time is reduced on a VR mode DVD-R disc, editing is no longer possible. This is because information about your edits requires a certain amount of disc space. As you edit, this information builds up, eventually preventing you from editing further.

Chapter 9
Copying and backup

Introduction

Use the copying features of this recorder to:

- Back up important recordings stored on the HDD to a DVD.
- Make a DVD copy of a recording on the HDD to play in another player.
- Transfer video from a DVD to the HDD for editing.
- Transfer edited video from the HDD to DVD.

The simplest way to copy a title is to use the One Touch Copy feature. This copies the currently playing HDD title to DVD, or DVD title to the HDD. See *One Touch Copy* on page 95 for detailed instructions.

For more sophisticated copying tasks you can build a Copy List of titles to copy, and edit titles so that you only copy the bits you want. See *Using Copy Lists* on page 96 for detailed instructions.

Where possible, the recorder will copy your recordings at high-speed. Depending on the recording mode, the kind of disc loaded and various other factors, copying can be as fast as one minute per hour of video. See *Minimum copying times* on page 129 for more on copying times.

If you want to save disc space you can copy video at a lower recording quality (for example, an XP recording on the HDD copied to SP on a DVD). Copying in this way is always done in real-time.

When real-time copying from the HDD to a Video mode DVD-R/-RW or DVD+R/+RW, the chapter markers in the original material are not copied. Chapter markers are put into the copy at intervals, according to the Auto Chapter settings (see also *Auto Chapter (Video)* on page 124 and *Auto Chapter (DVD+R/+RW)* on page 124).

Restrictions on copying

Commercial DVD-Video discs are protected using Copy Guard. These discs cannot be copied to the HDD.

Some video material is copy-once protected. This means that it can be recorded to HDD, but it can't then be freely copied again. If you want to transfer copy-once protected material from HDD to DVD, you'll need to a CPRM Ver. 1.1 or higher VR mode DVD-RW, Ver. 2.0 or 2.1 VR mode DVD-R, or CPRM-compatible DVD-RAM disc (see *CPRM* on page 54 for more on this). Only one instance of a copy-once protected title can be added to the Copy List, and after it's been copied, the title is erased from the HDD (it is therefore not possible to copy a locked title that is copy-once protected).

You can identify copy-once protected material during playback by displaying disc information on-screen. If the current title is copy-once protected, an exclamation mark (**!**) is shown.

Copyright

Recording equipment should be used only for lawful copying and you are advised to check carefully what is lawful copying in the country in which you are making a copy. Copying of copyright material such as films or music is unlawful unless permitted by a legal exception or consented to by the rightowners.

One Touch Copy

* See also *Copyright* above.

The One Touch Copy feature copies the currently playing or selected (in the Disc Navigator) HDD title to DVD, or DVD title to HDD. The whole title is copied, regardless of where in the title you start the copy.

HDD to DVD copies are made in the same recording mode. When copying DVD to HDD, the copy is made in whatever recording mode is currently set.

Make sure that a recordable DVD disc is loaded when trying to copy from the HDD.

1 SHIFT + REC MODE **If you're copying from DVD to the HDD, select a recording mode.**

Note that selecting a recording mode higher than the title playing will not result in a better quality recording.

2 ONE TOUCH COPY **Press during playback to copy the current title.**

The front panel display indicates that the title is being copied.

- High-speed copying is used when copying from the HDD to DVD. Playback continues while copying.
- Real-time copying is used when copying from DVD to the HDD. Playback restarts from the beginning of the title.

Canceling One Touch Copy

You can cancel a One Touch Copy once it's started.

- ONE TOUCH COPY **Press and hold for more than a second.**

Copying is canceled and the video already copied is erased.

- If you cancel a HDD to DVD-R/+R copy, the space available for recording does not return to the pre-copy figure.

Notes on copying using One Touch Copy

Copying to DVD

- Title name, chapter markers, as well as thumbnail picture markers for the Disc Navigator, are also copied. However, if you copy to a Video mode DVD-R/-RW or DVD+R/+RW, only the first 40 characters of a name are copied.
- The chapter markers in the copy may not be in exactly the same positions as the original when recording on to a Video mode DVD-R/-RW or DVD+R/+RW.
- You can't use the One Touch Copy function to copy a title if any part of the title is copy-once protected.
- A title that contains mixed aspect ratios can't be copied to a Video mode disc. Use a VR mode DVD-R/-RW or DVD-RAM disc for this type of material.

- Low resolution (**SEP** through **LP** modes[1]) widescreen material can't be copied to a Video mode disc. Use a VR mode DVD-R/-RW or DVD-RAM disc for this type of material.
- When HDD Recording Format is set to Video Mode Off, titles recorded in **LP**/**MN9** to **MN15** modes cannot be high-speed copied to a Video mode disc. Please use a VR mode DVD-R/-RW or DVD-RAM.
- Recordings of bilingual broadcasts cannot be high-speed copied to a Video mode DVD. Please use a VR mode DVD-R/-RW or DVD-RAM.
- Titles over 8 hours cannot be copied to single-layer DVD+R/+RW discs using One Touch Copy. Use DVD+R DL discs for titles over 8 hours.
- Titles recorded in **MN1** to **MN6**, **SEP**, **SLP** or **EP** mode cannot be copied to DVD+R/+RW using One Touch Copy.

Copying to the HDD

- The maximum title length for copying is 12 hours.
- Title name and chapter markers are also copied, except when copying from a finalized Video mode disc.
- Thumbnail picture markers and chapter markers for the Disc Navigator are copied, but their position in the copy may be slightly changed from the original.
- If some part of the title being copied is copy-protected, copying will start, but the copy-protected portions will not be copied.

Using Copy Lists

* See also *Copyright* on page 95.

At its simplest, a Copy List is just a list of HDD or DVD titles that you want to copy. When copying HDD titles to DVD, you can, however, edit the titles in your copy list, erasing chapters you don't need, or re-naming titles, for example. Edits you make to titles in the Copy List do not affect the actual video content; only the 'virtual' content of the Copy List. So you can freely erase and modify anything in your Copy List safe in the knowledge that the actual content is not being altered.

Copying from HDD to DVD

Important

- The recorder can only store one Copy List at a time.
- The Copy List is erased if the Input Line System setting is changed (see *Additional information about the TV system settings* on page 127).
- Resetting the recorder to its factory settings (see *Resetting the recorder* on page 141) will erase the Copy List.

1 Load a recordable DVD.

- It is possible to complete the following steps without having a recordable DVD loaded (or having an uninitialized DVD loaded); however, the steps are slightly different.
- If you want to use a DVD-RW (VR mode) disc for the copy, make sure it is initialized before you start.

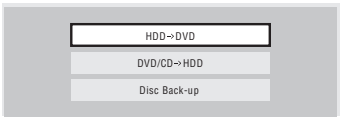
Note

1 In manual recording mode these equate to **MN1** to **MN15** (Video Mode Off) or **MN1** to **MN8** (Video Mode On).

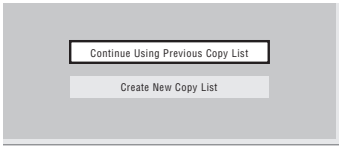
2 HOME MENU **Select 'Copy' from the Home Menu.**

3 ENTER **Select 'HDD → DVD'.**

If this is the first time to create a Copy List, skip to step **5** below.

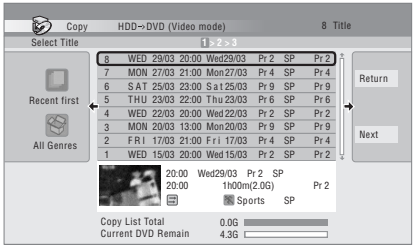


4 If there is already a Copy List stored in the recorder, choose whether to 'Create New Copy List' or 'Continue Using Previous Copy List'.



- If you select **Continue Using Previous Copy List**, skip to step 10 below.
- Selecting **Create New Copy List** will erase any Copy List already stored in the recorder.

5 ENTER **Add titles to the Copy List (highlight a title and press ENTER to add).**


Copy
HDD→DVD (Video mode)
8 Title
Select Title
8 WED 29/03 20:00 Wed29/03 Pr 2 SP Pr 2
7 MON 27/03 21:00 Mon27/03 Pr 4 SP Pr 4
6 SAT 25/03 23:00 Sat25/03 Pr 9 SP Pr 9
5 THU 23/03 22:00 Thu23/03 Pr 6 SP Pr 6
4 WED 22/03 20:00 Wed22/03 Pr 2 SP Pr 2
3 MON 20/03 13:00 Mon20/03 Pr 9 SP Pr 9
2 FRI 17/03 21:00 Fri 17/03 Pr 4 SP Pr 4
1 WED 15/03 20:00 Wed15/03 Pr 2 SP Pr 2
Recent first
All Genres
Return
Next
20:00 Wed29/03 Pr 2 SP
20:00 1h00m(2.0G) Pr 2
Sports SP
Copy List Total 0.0G
Current DVD Remain 4.3G

Titles you've added to the Copy List are highlighted in pink.

There are some restrictions on titles that can be added to the Copy List if you are copying to a Video mode DVD or DVD+R/+RW:

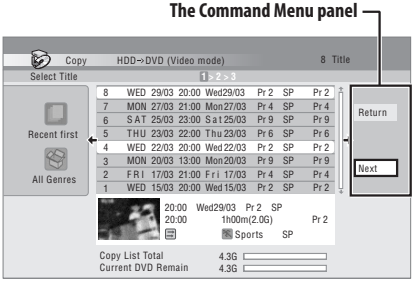
- When adding titles that contain copy-once protected material, the copy-once parts will not be added.
- When adding titles that contain material of more than one aspect ratio (screen size), each part with a different aspect ratio will be added as a separate title if high-speed copying is possible.

Depending on the title[1], high-speed copying may not be possible to a Video mode disc.

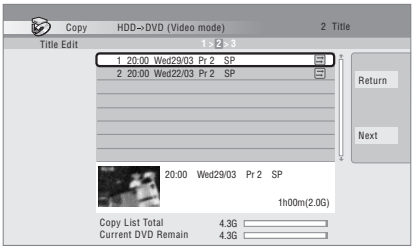
Note

1 • Widescreen titles recorded at low resolution (**SEP** through **LP**/**MN1** to **MN15** (Video Mode Off) or **MN1** to **MN8** (Video Mode On).
• **LP**/**MN9** to **MN15** recordings when HDD Recording Format is set to Video Mode Off.
• Bilingual recordings.
• Combined titles that were originally recorded using different recording modes.

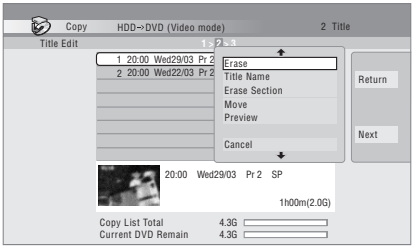
6 Press ➡ to display the command menu panel.



7 Select 'Next' to move on to the Title Edit screen.



8 To edit a title, highlight it using the ⬆/⬇ buttons, then press ENTER.



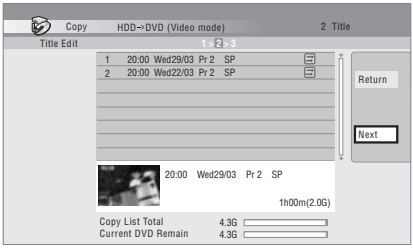
A menu of editing commands appears:

- **Erase** – Erase individual titles from the Copy List (see *Erase* on page 84).
- **Title Name** – Name or rename a title in the Copy List (see *Title Name* on page 84).
- **Erase Section** – Erase part of a title (see *Erase Section* on page 86).
- **Move** – Change the order of titles in the Copy List (see *Move* on page 90).
- **Preview** – Check the content of a title in the Copy List.
- **Divide** – Divide a title in the Copy List into two (see *Divide* on page 87).
- **Combine** – Combine two titles in the Copy List into one (see *Combine* on page 91).
- **Chapter Edit** – Edit chapters within a Copy List title (see *Chapter Edit* on page 88):
  - **Divide** – Divide a chapter into two.
  - **Erase/Move** – Erase a chapter/ Change the chapter order.
  - **Combine** – Combine two chapters into one.
- **Set Thumbnail** – Set the thumbnail frame for a title (see *Set Thumbnail* on page 85).
- **Recording Mode** – Set the picture quality of the copy (see *Recording Mode* on page 101).
- **Bilingual** – Set how bilingual audio should be copied when copying from HDD to Video mode DVD (see *Bilingual* on page 101).
- **Cancel** – Exit the menu.

Repeat this step for as many titles you have that need editing.

9 **Display the command menu panel.**

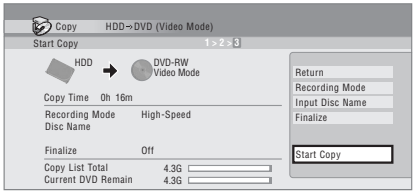
10 **Select ‘Next’ to proceed.**



There are several options available from the next screen:

- Select **Recording Mode** if you want to change the recording quality (see *Recording Mode* on page 101).[1]
- Select **Input Disc Name** if you want to change the disc name. Input a name of up to 64 characters for a VR mode disc or 40 characters for a Video mode disc or DVD+R/+RW. (The input method is similar to that of naming titles; see *Title Name* on page 84.)
- Select **Finalize** if you want to automatically finalize a Video mode DVD or DVD+R after copying.[2] Select a title menu style from the following screen.

11 **Select ‘Start Copy’ to start copying.**



- If you’re using a DVD-R DL or DVD+R DL disc and the copy will span both layers, the **Copy List Total** bar will be purple.
- The **Current DVD Remain** bar will be half-length if the first layer of a DVD-R DL or DVD+R DL disc is already full.

Note

1 Titles recorded in **MN1** to **MN6**, **SEP**, **SLP** or **EP** mode cannot be copied to DVD+R/+RW using high-speed copy.
2 If a timer recording is scheduled to start during copying, the disc will not be finalized.

Copying from DVD to HDD

Important

- The DVD to HDD Copy screen isn't accessible when a finalized Video mode disc or a DVD-Video is loaded. As long as the disc is not Copy Guard protected, you can still use the One Touch Copy function, however (See *One Touch Copy* on page 95).
- The recorder can only store one Copy List at a time.
- The Copy List will be erased if:
  – any of the titles on the DVD disc are erased or edited.
  – the disc tray is opened.
  – playback is switched between Play List and Original.
  – the DVD disc is re-initialized or finalized.
  – the recorder is reset to its factory settings (see *Resetting the recorder* on page 141).
- It may not be possible to copy from a DVD disc that was recorded on a different DVD recorder or a PC.

1

Select 'Copy' from the Home Menu.

2

Select 'DVD/CD → HDD'.

3

Select a Copy List type.

- Selecting **Create New Copy List** will erase any Copy List already stored in the recorder.

4

Add titles to the Copy List (highlight a title and press ENTER to add).
Titles you've added to the Copy List are highlighted in pink.

5

Select 'Next' from the command menu panel to proceed to the title edit screen.

6

Select a title to edit.
A menu appears of Copy List editing commands:

- **Erase** – Erase individual titles from the Copy List (see *Erase* on page 84).
- **Move** – Change the order of titles in the Copy List (see *Move* on page 90).
- **Preview** – Check the content of a title in the Copy List.
- **Cancel** – Exit the menu.

Repeat this step for as many titles you have that need editing.

7

Select 'Next' from the command menu panel to proceed to the copy options screen.

- Select **Recording Mode** if you want to change the recording quality (see *Recording Mode* on page 101).

8 **Select 'Start Copy' to start copying.**

Recording Mode

1 **Select 'Recording Mode' from the command menu panel.**

2 **Select a recording mode for the copy.**

- **High-Speed Copy**[1] – The Copy List is copied at the same recording quality as the original.
- **XP**, **SP**, **LP**, **EP**, **SLP**, **SEP**, **MN**[2] – The Copy List is copied at the specified recording quality in real-time. (Note that if you copy at a higher quality setting than the original, the copy will not be better quality than the original.)

  If you select **MN** above, you can also change the level setting (**MN1** to **MN32**[3] or **LPCM**) from the Recording Quality box that appears.
- **Optimized**[2,4] – The recording quality is automatically adjusted so that the Copy List fits on to the space available on the disc. Copying is carried out in real-time.

When you change the recording mode setting, you can see how much disc space it will require. If this is more than is available, it shows up in red and you won't be able to start copying. In this case, either change the recording quality, or press **RETURN** to go back to the Copy List screen and erase one or more titles from the Copy List.

Bilingual

1 **Select the title containing the audio you want to change.**

2 **Select 'Bilingual' from the command menu panel.**

3 **Select a bilingual audio option.**

Note

1 When copying to a Video mode DVD or DVD+R/+RW, the chapter markers in the copy may not be in exactly the same position as the original.

2 When the copy mode is set to something other than High-Speed Copy for copying to a Video mode DVD or DVD+R/+RW, the chapter markers of the original are not copied. Chapter markers are put into the copy at regular intervals, according to the Auto Chapter setting (see also *Auto Chapter (Video)*) and *Auto Chapter (DVD+R/+RW)* on page 124.

3 When copying to a DVD+R/+RW, **MN1** to **MN3** and **SEP** modes are not available.

4 Optimized mode only available when copying to DVD.

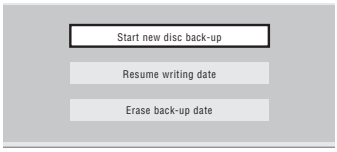
Using disc backup

* See also *Copyright* on page 95.

This feature offers a simple way to make a backup copy of a finalized Video mode disc or DVD+R/+RW. The data is copied first to the hard disk drive[1], then on to another recordable DVD disc.

1 HOME MENU Select 'Copy', then 'Disc backup' from the Home Menu.

2 Select a backup option.

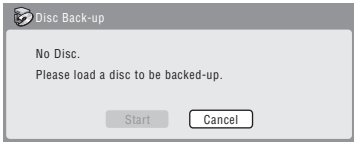


There are three backup options:

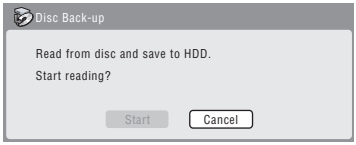
- **Start new disc backup** – Start making a backup of a disc.
- **Resume writing data** – Record the backup data already on the HDD to a recordable DVD.
- **Erase backup data** – Erase the backup data on the HDD.

3 Load the disc you want to make a backup of.

You can only make backup copies of finalized Video mode discs, finalized DVD+R or DVD+RW discs (excluding DVD-R DL/ DVD+R DL discs).



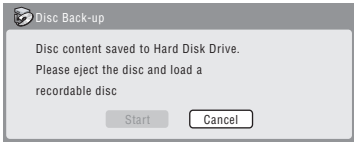
4 Select 'Start'.



- To see the progress of the backup, press **DISPLAY**.
- You can cancel the backup process by pressing **ONE TOUCH COPY** for more than one second.

5 When the data has been copied, take out the disc and load a blank* recordable DVD.

** If you're using a DVD-RW or DVD+RW, the disc doesn't have to be blank, although the previous contents of the disc will be erased in the backup process.*



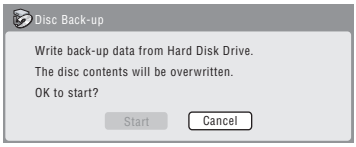
Note

1 It is not possible to play this material directly from the HDD.

You can use a DVD-R ver. 2.0 or 2.1 disc, or DVD-RW ver. 1.1 or ver. 1.2 disc for the backup.

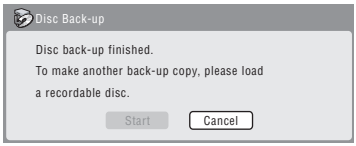
- If you backup a DVD-R disc to DVD-RW, you cannot undo the finalization later.
- Actual recordable capacity of discs vary so there may be cases where the contents of the disc you're backing-up will not fit on to a particular blank disc. If this happens, please try another brand of disc.
- DVD-R/-RW discs can only be backed up to DVD-R/-RW discs; DVD+R/+RW discs can only be backed up to DVD+R/+RW discs.

6 Select 'Start' to start writing the backed-up data to the blank disc.



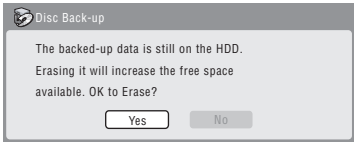
- To see the progress of the backup, press **DISPLAY**.
- You can cancel the backup process by pressing **ONE TOUCH COPY** for more than one second. However, this will make the disc unusable (although if you are using a DVD-RW or DVD+RW disc you can re-initialize it in order to make it usable again—see *Initializing recordable DVD discs* on page 66.)

7 After the recorder has finished recording the backup disc, you can select whether to make another backup of the same data or exit.



- Select **Start** to make another backup copy or **Cancel** to finish. If you want to make another backup copy, return to step **6** above.

8 If you don't need to keep the backup data on the HDD, you can delete it now. Select **Yes** to delete the data from the HDD; select **No** to keep it (you can delete it later if you want to).



- If you decide to leave the backup data on the HDD, you can make backup copies to recordable DVD discs anytime from the Disc Back-up menu.

Chapter 10
Using the Jukebox

The Jukebox feature allows you to use the recorder's HDD to store and playback music from up to 999 of your CDs. You can also transfer WMA/MP3 files stored on CD-R/-RW/-ROM. Once on the HDD, you can name albums, assign them a genre, and set tracks that you don't want to play to Jump.

Copying music to the HDD

The first step is to copy some music to the HDD. CD audio is copied in real-time, while WMA and MP3 files are copied at high speed. All tracks are copied from each CD[1] as an album.

WMA/MP3 album and track names are copied along with the audio. CD album and track names are not copied, but you can add these later (see *Editing Jukebox albums* on page 106).

Usually, the tracks are copied to the HDD in the order they appear on the CD. When copying CD audio, you can copy them in some other order using the program play mode. See *Program play* on page 76 for how to do this.

Note that once copied to the HDD, audio tracks cannot be copied to a recordable DVD disc.

Important

- While copying CD audio, no other recorder operation is possible.
- When copying CD audio, scheduled timer recordings will not start until copying is complete.
- Copy protected CDs may not copy successfully.

1 Load the CD you want to copy to the HDD.

2

Select 'Copy' from the Home Menu.

3

Select 'DVD/CD to HDD'.

On pressing **ENTER** all tracks (or files) on the CD are copied to the HDD.

- You can also start copying by starting playback of the CD (including program play) and then pressing **ONE TOUCH COPY**.
- To cancel copying and audio CD, press and hold **ONE TOUCH COPY** for more than one second.
- To cancel copying a WMA/MP3 disc, press **ENTER**.
- If the CD loaded contains both CD audio tracks and WMA/MP3 files, the part currently selected will play.

Note

1 The recorder can copy up to 999 CDs; a CD can contain up to 99 tracks. The recorded audio format is 256 kbps Dolby Digital.

Playing music from the Jukebox

You can select albums or individual tracks from the Jukebox to play.[1]

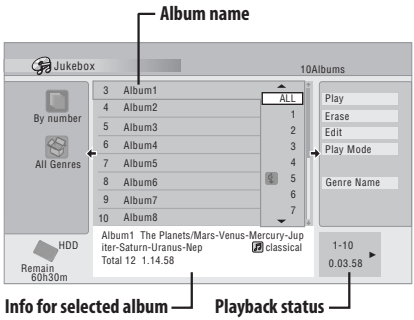
1 HOME MENU **Select 'Jukebox' from the Home Menu.**

2 **Select a Jukebox option.**

- **Listen to Music/Edit** – Listen to CDs that have been copied to the HDD.
- **Listen to Music (WMA/MP3)/Edit** – Listen to WMA or MP3 files that have been stored on the HDD.

3 **Select what you want to play.**

The screen below shows CD albums stored on the HDD:

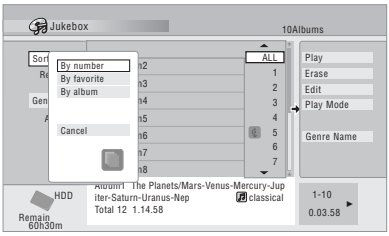


- If you select a whole album to play, all tracks that are not set to Jump will play.
- If you want to start playback from a selected track in an album, or play a track that is set to Jump, press ➡ to enter the track list then select a track to play.
- Press **SHIFT** + **SUBTITLE** or **SHIFT** + **ANGLE** to change the page.

Changing the album view

1 **From the album list, display the view options menu panel.**

2 **Select a view option.**



- **Sort order**

  By number – Albums are listed by the album number.

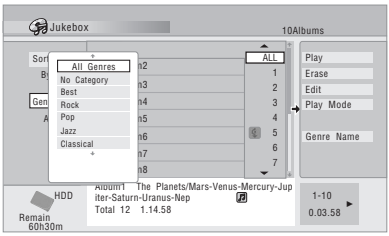
  By favorite – Most often listened to music appears at the top of the list.

  By album – Albums are listed alphabetically.

Note

1 The digital audio output contains a copy-prohibit signal when albums are playing from the HDD.

- **Genre**



All Genres – All albums are displayed.

Genre – Only albums in the selected genre are displayed.

Editing Jukebox albums

A number of commands are available for editing and changing the playback behaviour of albums.

1 HOME MENU Select 'Jukebox' from the Home Menu.

2 ENTER Select 'Listen to Music/Edit' or 'Listen to Music (WMA/MP3)/Edit'.

3 ENTER Select what you want to edit.

4 ENTER Select an edit function from the command menu panel.

- **Erase** – Erase the selected track (if all tracks in an album are selected, the whole album is erased).
- **Edit > Edit Title** – Enter a name of up to 64 characters for the album. See page *Title Name* on page 84 for how to enter names.
- **Edit > Set Genre** – Set or change the genre for the album.
- **Edit > Jump Set**[1] – Set a track to jump so that it doesn't play (choose this command again to cancel the Jump setting).
- **Play Mode** – Change the playback order for albums and tracks.
- **Genre Name** – Enter a name of up to 12 characters for a genre. See page *Title Name* on page 84 for how to enter names.

Note

1 Tracks set to Jump will be skipped during consecutive track playback.

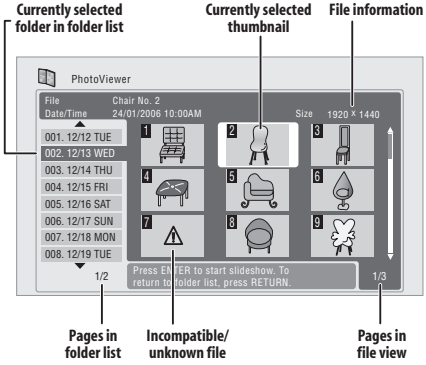
Chapter 11
The PhotoViewer

From the PhotoViewer you can view JPEG photos and picture files stored on a CD-ROM/R/RW.[1]

Locating JPEG picture files

1 HOME MENU **Select 'PhotoViewer' from the Home Menu.**

2 **Select the folder containing the files you want to view.**



- If you encounter a disc that will not play, check that the disc and file formats are compatible with this recorder (see *JPEG file compatibility* on page 11 and *PC-created disc compatibility* on page 12).

Playing a slideshow

1 **Select a folder from the folder list.**

The first nine images from the selected folder are displayed as thumbnails in the main part of the screen.

- The larger the file size, the longer it takes the recorder to load the file.

The first thumbnail image is highlighted.

- You can also select a folder, then press ➡ to get to the thumbnail view area.
- To get back to the folder list, press **RETURN** (or ⬅ when the leftmost thumbnail is highlighted).

2 **Select a thumbnail from which to start the sideshow.**

- Use the ⏮ and ⏭ buttons to display the previous/next page of thumbnails.
- You can also select a file or folder then press ▶ **PLAY** to start playing the slideshow.
- Use ⏮ **PREV** / **NEXT** ⏭ to display the previous/next picture, or ⏸ **PAUSE** to pause the slideshow.

Note

1 Up to 999 files or 99 folders are viewable, but if there are more files/folders than this on the disc it is still possible to view them all using the Reload function (see the following page).

- Depending on the aspect ratio, some pictures may be displayed with black bars top and bottom, or left and right.
- Large picture files may take a few seconds to display. This is normal.

3 STOP ■ Press to return to the thumbnail view area.
- You can also use the **RETURN** button.

4 RETURN/EXIT Press to return to the folder view area.
- With the leftmost thumbnail highlighted, you can use the ⬅ button.
- To exit the PhotoViewer, press **HOME MENU**.

Zooming an image

During a slideshow you can zoom in to enlarge a portion of the picture by a factor of two or four. You can also move the area of the picture displayed.

1 ENTER Press during the slideshow to zoom the picture.
Repeated presses cycle between zoom off, 2 x zoom and 4 x zoom. The zoom factor is displayed on-screen.

2 Use to move the zoomed area.

Rotating an image

You can rotate the displayed picture during a slideshow so you can always view pictures the right way up, whichever way they were taken.

- **SHIFT + ANGLE 6 Press during the slideshow to rotate the displayed picture clockwise by 90°.**
Press repeatedly to continue rotating the picture in increments of 90 °.

Chapter 12
The Disc Setup menu

From the Disc Setup menu you can name discs, lock the contents to prevent accidental recording and erasure, initialize and finalize discs. The Disc Setup menu is accessed from the Home menu:

Basic settings

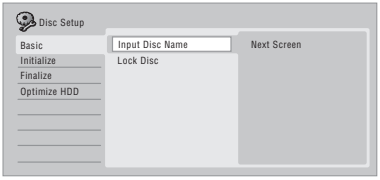
Input Disc Name

DVD (VR) DVD (Video) DVD+R DVD+RW DVD-RAM

When you initialize a disc for recording, the recorder automatically assigns a name for the disc ranging from **DISC 1** to **DISC 99**. You can use the Input Disc Name function to change the default disc name to something more descriptive. This name appears when you load the disc and when you display disc information on-screen.

1 HOME MENU **Select 'Disc Setup' from the Home Menu.**

2 ENTER **Select 'Basic' > 'Input Disc Name' > 'Next Screen'.**



3 ENTER **Input a name for the disc.**

The disc name can be up to 64 characters long for a VR mode disc, or 40 for a Video mode discs and DVD+R/+RW.

- See *Title Name* on page 84 for more on navigating the input screen.

Lock Disc

DVD (VR) DVD-RAM

- Default setting: **Off**

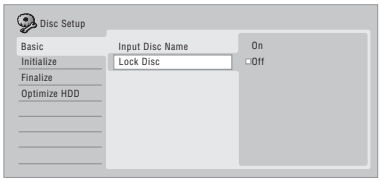
Locking the disc will prevent accidental recording, editing or erasing of the disc.

Important

- A locked disc can still be initialized (which will completely erase the disc).

1 HOME MENU **Select 'Disc Setup' from the Home Menu.**

2 ENTER **Select 'Basic' > 'Lock disc' then 'On' or 'Off'.**



Set to **On** to prevent accidental recording, editing or erasing of the disc loaded. If you need to unlock the disc to make edits, select **Off**.

Initialize settings

DVD-R DVD-RW DVD+RW DVD-RAM

You can initialize a recordable DVD-R/-RW disc for either VR mode or Video mode recording.

The first time you load a new DVD-RW disc, it will be automatically initialized for recording according to the DVD-RW Auto Init. setting in the Initial Setup menu (see page 124).

New DVD-R discs are ready for Video mode recording when you load them, but it is also possible to initialize them for VR mode recording.[1]

DVD+RW and DVD-RAM discs can also be initialized as a way of erasing the entire disc. When initializing a DVD-RAM disc, select VR mode.

See *Initializing recordable DVD discs* on page 66 for detailed instructions.

Finalize settings

Finalize

DVD-R DVD-RW DVD+R DVD+RW

Finalizing 'fixes' the recordings in place so that the disc can be played on a regular DVD player or computer equipped with a suitable DVD-ROM drive.

It is also possible to finalize DVD+RW discs. This is only necessary if you want to a player to display a title menu for the disc.

See *Playing your recordings on other DVD players* on page 64 for detailed instructions.

Undo Finalize

DVD-RW

You can undo the finalization on DVD-RW discs recorded on this recorder in Video mode. You need to do this if you want to record more material or edit material already on the disc.

You can also undo the finalization of VR mode discs which have been finalized on other DVD recorders. If when you load a disc the message **This disc cannot be recorded. Undo the finalization** is displayed, use this command to be able to record on the disc using this recorder.

1 HOME MENU **Select 'Disc Setup' from the Home Menu.**

2

Select 'Finalize' > 'Undo Finalize' then 'Start'.

Note

1 Once initialized for VR mode recording it is not possible to re-initialize the disc for Video mode recording. Also, once recorded in Video mode, the disc cannot be re-initialized for VR mode recording.

Optimize HDD

HDD

As you record, erase and edit recordings, the HDD file system gradually becomes fragmented. Periodically, the HDD will need optimizing to 'clean up' all the fragmented files.

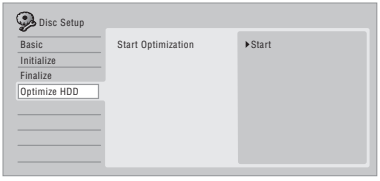
When the HDD needs optimizing the recorder will automatically display a message recommending optimization.

Important

- Optimizing the HDD can take as long as eight hours. During optimization, playback and recording are not possible.
- Canceling optimization mid-way does not undo the optimization already done, so the HDD will be partly optimized.

1 HOME MENU Select 'Disc Setup' from the Home Menu.

2 ENTER Select 'Optimize HDD' then 'Start'.



A progress bar indicates how long there is left to go.

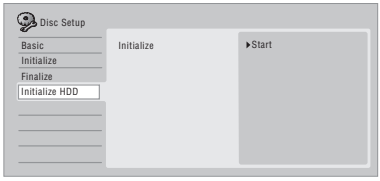
Initialize HDD

HDD

When your DVD recorder is working without a problem this option is not visible in the Disc Setup menu. However, if the HDD file system becomes corrupted for some reason, you can initialize the HDD to fix the problem. Note that initializing the HDD will erase all the data on it.

1 HOME MENU Select 'Disc Setup' from the Home Menu.

2 ENTER Select 'Initialize HDD' then 'Start'.



Chapter 13
The Video Adjust menu

Using the Video Adjust menu you can set up the picture quality for the built-in tuner and external inputs, for disc playback, and for recording.

Setting the picture quality for TV and external inputs

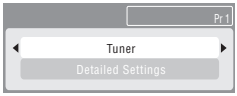
Picture Creation lets you choose a set of picture quality settings for the built-in TV tuner and for each external input. There are several preset settings that suit various sources, or you can create up to three of your own sets.

Choosing a preset

1 HOME MENU **With the recorder stopped, press to display the Home Menu.**

2 **Select 'Video Adjust'.**

3 **Select a preset.**



- Use the **INPUT SELECT** button to switch between the built-in TV tuner and the external inputs.
- Use the I◄◄/►►I buttons to change the channel of the built-in TV tuner.

There are six presets available:

- **Tuner** – suitable for general TV broadcasts
- **VCR** – suitable for video cassettes
- **DTV/LDP** – suitable for digital broadcasts and Laserdiscs
- **Memory1** – user preset 1
- **Memory2** – user preset 2
- **Memory3** – user preset 3

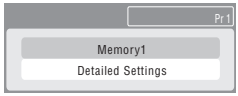
You can press **DISPLAY** to see the individual settings for the current preset (**Tuner**, **VCR** or **DTV/LDP**).

Creating your own set

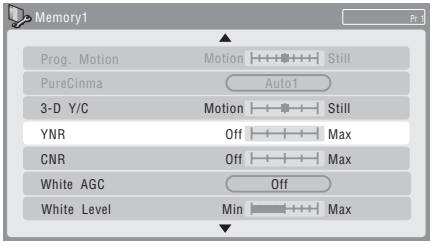
There are three user presets in which you can save your own set of picture quality settings.

1 Follow *Choosing a preset* **above and select one of the user presets (Memory 1, 2 or 3).**

2 **Select 'Detailed Settings'.**



3 **Select the setting you want to adjust.**



You can adjust the following settings:

- **Prog. Motion** – Adjusts the motion and still picture quality when video output is set to progressive.
- **PureCinema** – This setting optimizes the picture for film material when the video output is set to progressive. Usually this is best left set to **Auto**; try switching to **Off** if the picture appears unnatural.
- **3-D Y/C** – Adjusts the brightness / colour separation (NTSC video input only).
- **YNR** – Adjusts the amount of noise reduction (NR) applied to the Y (brightness) component.
- **CNR** – Adjusts the amount of noise reduction (NR) applied to the C (colour) component.
- **White AGC** – Turn on for automatic white level adjustment.[1]
- **White Level** – Adjusts the intensity of white.
- **Black Level** – Adjusts the intensity of black.
- **Black Setup** – Corrects the standard reference black level (NTSC video input only).
- **Hue** – Adjusts overall balance between red and green.
- **Chroma Level** – Adjusts how rich the colours appear.

4 **Adjust the currently selected setting.**

5 **Press to exit.**

You can now use the preset for any other input or the built-in TV tuner.

Tip

- To see more of the picture as you adjust different settings, press **ENTER** after selecting the setting you want to adjust.

Note

1 When **White AGC** is **On**, the **White Level** setting can't be adjusted.

Setting the picture quality for disc playback

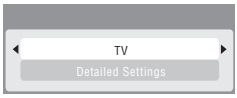
This setting determines how the picture will look when playing discs.

Choosing a preset

1 With a disc playing (or paused), press HOME MENU to display the Home Menu.

2 Select 'Video Adjust'.

3 Select a setting.



There are six presets available:

- **TV** – suitable for LCD and cathode-ray tube TVs
- **PDP** – suitable for plasma display screens
- **Professional** – suitable for professional monitors
- **Memory1** – user preset 1
- **Memory2** – user preset 2
- **Memory3** – user preset 3

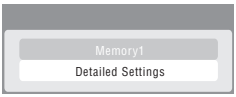
You can press **DISPLAY** to see the individual settings for the current preset (**TV**, **PDP** or **Professional**).

Creating your own set

There are three user presets in which you can save your own set of picture quality settings for disc playback.

1 Follow *Choosing a preset* **above and select one of the user presets (Memory 1, 2 or 3).**

2 Move the cursor down and select 'Detailed Settings'.



3 Select the picture quality setting you want to adjust.

You can adjust the following settings:

- **Prog. Motion** – Adjusts the motion and still picture quality when video output is set to progressive.
- **PureCinema** – This setting optimizes the picture for film material when the video output is set to progressive. Usually this is best left set to **Auto 1**; try switching to **Auto 2**, **On** or **Off** if the picture appears unnatural.
- **YNR** – Adjusts the amount of noise reduction (NR) applied to the Y (brightness) component.
- **BNR** – Adjusts the amount of noise reduction (NR) applied to the block noise (artefacts visible in areas of flat colour, caused by MPEG compression).

- **MNR** – Adjusts the amount of noise reduction (NR) applied to the mosquito noise (artefacts visible around the edges of an image, caused by MPEG compression).
- **Detail** – Adjusts how sharp edges appear.
- **White Level** – Adjusts the intensity of white.
- **Black Level** – Adjusts the intensity of black.
- **Black Setup** – Corrects the standard reference black level (NTSC video playback only).
- **Gamma Correction** – Adjusts the brightness of darker images.
- **Hue** – Adjusts overall balance between red and green.
- **Chroma Level** – Adjusts how rich the colours appear.

4 Use the ←/→ buttons to adjust the currently selected picture quality setting.

5 When you have all the settings as you want them, press HOME MENU to exit.

Tip

- To see more of the picture as you adjust different settings, press **ENTER** after selecting the setting you want to adjust.

Chapter 14
The Initial Setup menu

Using the Initial Setup menu

The Initial Setup menu is where you can set various recorder options for sound, picture, language and so on.

Some settings can only be changed when the recorder is stopped. During playback and recording these settings are grayed out in the Initial Setup menu.

Except for the Setup Navigator, menu screens are exited automatically after 20 minutes of inactivity.

- **Press HOME MENU and select 'Initial Setup'.**

In the table below, the default option is marked with a •.

Setting	Options	Explanation
Basic		
Clock Setting	**Auto**	Set the channel that broadcasts a clock signal and the clock will be set automatically.
	Manual •	If there is no channel that broadcasts a clock signal in your area, you can set the time and date manually.
The clock must be set in order to use timer recording.		
Input Line System	**525 System**	Use for NTSC or PAL-60 recording from an external input.
	625 System •	Use for standard PAL or SECAM recording.
See also About the input line system on page 127 for more information on this setting.		
Power Save	**Mode 1**	Only signals arriving at the antenna input are passed through to the antenna output when the recorder is in standby.
	Mode 2	No input signals are passed through to the outputs when the recorder is in standby.
	Off •	When the recorder is in standby, all signals arriving at the SCART and antenna inputs are passed along to the outputs.

Setting	Options	Explanation
HELP Setting	**On •**	Switches on the automatic Help screens for GUI displays.
	Off	Switches off the automatic Help screens for GUI displays. (Press **HELP** on the remote to manually display the Help screen.)
Setup Navigator	**Start**	Select to start the Setup Navigator. See also *Switching on and setting up* on page 29.
Tuner		
Auto Channel Setting	**Auto Scan**	Select your country and then wait for the recorder to auto tune into channels in your area. After auto scan has finished, the channel mapping screen appears showing which channels have been assigned to which program numbers. You can skip unwanted channels using the Manual CH Setting option below. Press **HOME MENU** to exit the channel mapping screen.
	Download from TV	If your TV supports this feature you can download all the channels that your TV is tuned to via the SCART input. Select your country and then wait for the download to complete. After the download is complete, the channel mapping screen appears, as above. See also the operating instructions that came with your TV for more information.

Setting	Options	Explanation
Manual CH Setting	**Next Screen**	Proceed to the next screen if you need to adjust any of the settings made by auto tuning. Select your country, then proceed to the manual channel setting screen: • Change channel presets using the I◄◄/►►I buttons. • To skip the displayed channel (because there is no station assigned to that channel), change the **Skip** setting to **On**. • Set the **CH SYSTEM** setting to match the channel system of your country or region. • Set the **CHANNEL** setting to the channel you want to assign to the current channel preset. • To manually fine tune the channel, change the **AFT** setting to **Off** then adjust the **Level** setting. • Set the **Sound System** setting to match the sound system of your region. • The **Name** field allows you to input a name of up to five characters for the current channel preset. • If the currently selected channel is scrambled requiring a decoder connected to the **AV2 (INPUT 1/ DECODER)**, set the **Decoder** setting to **On**.
Channel Swapping	**Next Screen**	Proceed to the next screen to swap channel assignments of different presets so that you can group together presets that naturally go together. Select two presets to swap then press **ENTER**.
Video In/Out		
Input Colour System	**Next Screen**	Proceed to the next screen to set the input colour system for the external input and the built-in TV tuner. Use the **CH +/–** buttons to change the preset. On the default **Auto** setting the recorder can generally correctly detect whether the input signal is PAL, SECAM, 3.58 NTSC or PAL-60, but in some cases you may have to set it manually if the picture is displayed incorrectly.

See also About the input colour system on page 128 for more information on this setting.

Setting	Options	Explanation
Component Video Out	**Interlace** •	Select if your monitor/TV is not compatible with progressive-scan video.
	Progressive	Select if your monitor/TV is progressive-scan compatible. Check the operating instructions that came with your monitor/TV if you're not sure.
For Component Video Out to be effective, the AV1 Out setting (see below) must be set to something other than **RGB**.		
AV1 Out	**Video** •	Sets the **AV1(RGB)-TV** SCART output to standard composite video (compatible with all TVs).
	S-Video	Sets the **AV1(RGB)-TV** SCART output to S-video. Recommended if you are using a long SCART cable.
	RGB	Sets the **AV1(RGB)-TV** SCART output to RGB. Good quality but check your TV for compatibility. Note that on this setting signals from the built-in tuner and from external inputs is not output when the recorder is in TV mode.
If you choose a setting that is incompatible with your TV you may not be able to see any picture at all. In this case either switch off and reconnect using the supplied video cable, or reset the recorder (see Resetting the recorder on page 141). *The Component Video Out setting (see above) has no effect when AV1 Out is set to* **RGB**.		
AV2/L1 In	**Video** •	Sets the **AV2 (INPUT 1/DECODER)** SCART input to standard composite video.
	S-Video	Sets the **AV2 (INPUT 1/DECODER)** SCART input to S-video.
	RGB	Sets the **AV2 (INPUT 1/DECODER)** SCART input to RGB.
	Decoder	Use this setting if you connected a decoder to the **AV2 (INPUT 1/DECODER)** SCART connector. For scrambled channels, make sure that the channel **Decoder** setting is set to **On**. (See *Manual CH Setting* page 118.)
When the Input Line System is set to **525 System**, **RGB** *cannot be selected.* *Even when set to* **RGB**, *depending on the connected device, the input signal may be composite video.*		

Setting	Options	Explanation
NTSC on PAL TV	**On** •	NTSC discs will play correctly on PAL-only TVs.
	Off	Use if your TV is already NTSC-compatible.

Many recent PAL TVs are compatible with NTSC input and so this setting can be switched off. Check the operating instructions that came with your TV. See also About NTSC on PAL TV on page 127 for related information.

Audio In		
NICAM Select	**NICAM** •	Record the NICAM audio in a NICAM broadcast.
	Regular Audio	Record the non-NICAM audio in a NICAM broadcast. (You can still switch the audio to record using the **AUDIO** button before recording.)
Tuner Level	**Normal** •	Standard setting.
	Compression	Use if the audio level from the built-in tuner is excessive, causing distortion.
External Audio	**Stereo** •	Select if the audio from the currently selected external input is standard stereo.
	Bilingual	Select if each channel carries a separate soundtrack.
Bilingual Recording	**A/L** •	Record the left (A) channel of a bilingual source when recording to HDD with HDD Recording Format set to Video Mode On, to DVD in Video mode or in **LPCM** mode, from an external source.
	B/R	As above, but for right (B) channel recording.

When recording bilingual audio to DVD in VR mode (except in **LPCM** *mode), or to HDD with HDD Recording Format set to Video Mode Off (except in* **LPCM** *mode), both audio channels are recorded and you can switch to the one you want on playback.*

Audio Out		
Digital Out	**On** •	Activates the digital audio output.
	Off	Deactivates the digital audio output.

When set to **Off***, all the following Audio Out settings are grayed out.*

Dolby Digital Out	**Dolby Digital** •	Output a Dolby Digital signal when a Dolby Digital source is being played.
	Dolby Digital → PCM	Convert Dolby Digital sources to Linear PCM output. Use if your connected equipment doesn't have a Dolby Digital decoder.

Setting	Options	Explanation
DTS Out	**On** •	Output a DTS signal when a DTS source is being played.
	Off	Switch off the digital output when a DTS source is being played. Use when your connected equipment doesn't have a DTS decoder. In this case, use the analog audio outputs.
96 kHz PCM Out	**96 kHz → 48 kHz** •	Convert 96 kHz digital audio sources to 48 kHz output. Use if your connected equipment doesn't support 96 kHz sampling rate.
	96 kHz	Output 96 kHz digital audio when a 96 kHz source is being played.
MPEG Out	**MPEG**	Output an MPEG audio signal when a source using MPEG audio is being played.
	MPEG → PCM •	Convert sources with MPEG audio to Linear PCM output. Use if your connected equipment doesn't have an MPEG audio decoder.
Audio DRC	**On**	Switches on Audio DRC (Dynamic Range Control). Use when listening to Dolby Digital material at low volume.
	Off •	Switches off Audio DRC.

Audio DRC is not effective when listening via the digital output when the Dolby Digital Out *setting is set to* **Dolby Digital**.

Language		
OSD Language	**English** •	Sets the language of the on-screen displays to English.
	available languages	Choose from the languages displayed for the on-screen displays.

Setting	Options	Explanation
Audio Language	**English •**	Sets the default audio language for DVD-Video playback to English.
	available languages	Choose from the languages displayed to set the default audio language for DVD-Video playback.
	Other	Select to set the default audio language to something other than the ones listed. See *Selecting other languages for language options* on page 128.
Discs do not necessarily have audio in your selected language. Also, some discs override the Audio Language preference.		
Subtitle Language	**English •**	Sets the default subtitle language for DVD-Video playback to English.
	available languages	Choose from the languages displayed to set the default subtitle language for DVD-Video playback.
	Other	Select to set the default subtitle language to something other than the ones listed. See *Selecting other languages for language options* on page 128.
Discs do not necessarily have subtitles in your selected menu language. Also, some discs override the Subtitle Language preference.		
Auto Language	**On •**	On this setting: • DVD-Video discs whose main audio track is in your default language will play using that language, without subtitles. • Discs whose main audio track is not in your default language but that have a subtitle track in your default language will play the original audio track with subtitles.
	Off	Select to play DVD-Video discs according to your audio and subtitle language preferences.
For Auto Language to be effective, the Audio Language and Subtitle Language options must be set to the same language.		

Setting	Options	Explanation
DVD Menu Language	**w/Subtitle Language •**	Sets the language of DVD-Video menus to the same as that set for the subtitle language.
	English	Sets the language of DVD-Video menus to English.
	available languages	Choose from the displayed languages to set the default language for DVD-Video menus.
	Other	Select to set the DVD menu language to something other than the ones listed. See *Selecting other languages for language options* on page 128.
Discs do not necessarily have menus in your selected menu language.		
Subtitle Display	**On •**	Select to have discs display subtitles according to your Subtitle Language and Auto Language preferences.
	Off	Select to switch off subtitle display.
	Assist Subtitle	Select to display special additional assistive subtitles, where available.
Some discs may override these settings.		
Recording		
Manual Recording	**On (go to setup)**	All the standard recording modes, plus **MN1** to **MN32** and **LPCM** modes can be set.
	Off •	Just the standard recording modes (**XP**, **SP**, **LP**, **EP**, **SLP** and **SEP**) can be set.
See also Manual recording modes on page 130 *for detailed information on manual recording levels.*		
Optimized Rec	**On**	The recording quality of timer recordings is automatically adjusted to fit on to the selected media if it will not fit at the selected quality setting. If the recording will not fit even at **MN1**(**MN4** for DVD+R/+RW), then the recording will start at **MN1** and stop when all the available space is used up.
	Off •	When a timer recording is set that won't fit on to the selected media, the recording starts but is cut off when no more recording is possible.
Optimized Rec will only compensate for the next scheduled timer recording if more than one is set. It cannot be used together with VPS/PDC.		

Setting	Options	Explanation
Set Thumbnail	**0 seconds •**	Sets the default thumbnail picture in the Disc Navigator to the first frame of the title.
	30 seconds	Sets the default thumbnail picture to 30 seconds into the title.
	3 minutes	Sets the default thumbnail picture to 3 minutes into the title.
Auto Chapter (Video)	**No Separation**	Automatic chapter marking is switched off.
	10 minutes •	When recording in Video mode, chapter markers are inserted every 10 minutes.
	15 minutes	Chapter markers are inserted every 15 minutes.
This settings applies to recording or real-time copying to Video mode DVD-R/-RW discs.		
Auto Chapter (DVD+R/+RW)	**No Separation**	Automatic chapter marking is switched off.
	10 minutes •	When recording in Video mode, chapter markers are inserted every 10 minutes.
	15 minutes	Chapter markers are inserted every 15 minutes.
DVD-RW Auto Init.	**VR Mode •**	Blank DVD-RW discs are initialized for VR mode recording when loaded into the recorder for the first time.
	Video Mode	Blank DVD-RW discs are initialized for Video mode recording.
HDD Recording Format	**Video Mode Off**	Recordings made to the HDD are made in VR mode. Use this setting if you don't need to transfer the recording later to a Video mode DVD.
	Video Mode On •	Recordings made to the HDD are compatible with Video mode recordings. This setting is convenient if you want to transfer the recording to a Video mode DVD as high-speed copy can be used.
When Video Mode On is used, you must select the audio channel you want to record when recording a bilingual broadcast. On the Video Mode Off setting, both channels will be recorded and you can switch between them on playback. See also Bilingual Recording on page 120.		

Setting	Options	Explanation
Playback		
TV Screen Size	**4:3 (Letter Box)** •	Select if you have a standard 4:3 TV and prefer the letter box format presentation for widescreen material.
	4:3 (Pan & Scan)	Select if you have a standard 4:3 TV and prefer the pan and scan presentation for widescreen material.
	16:9	Select if you have a widescreen 16:9 TV. Your TV settings determine how 4:3 material will look.
Selecting **4:3 (Letter Box)** *or* **4:3 (Pan & Scan)** *does not guarantee that all video material will be presented in that format as some discs override this setting.*		
Still Picture	**Field**	Produces a stable, generally shake-free image.
	Frame	Produces sharp image, but may be prone to shake.
	Auto •	Generates a generally less sharp but more stable still image.
Seamless Playback	**On**	Playback is smooth, but with a trade-off against the accuracy of the edit points.
	Off •	You may notice momentary interruption at edited points during playback of a VR mode Play List.
This setting applies to HDD, DVD-R/-RW (VR) and DVD-RAM playback.		
Parental Lock	**Set Password**	In order to change the parental lock level or change the country/area code, set the password using this option. From the following screen, enter a four-digit number that will be your password.
	Change Password	In order to change the password, first enter your existing password and then a new one from the following screen.
	Change Level	From the following screen, first enter your password and then set a parental lock level.
	Country Code	From the following screen, first enter your password and then set a country/area code.
Only certain discs have parental lock and country/area code features. Check the disc packaging to see what features the disc has. If you forget your password you can reset it by resetting the recorder to its factory settings. See Resetting the recorder on page 141.		

Setting	Options	Explanation
Angle Indicator	**On** •	A camera icon appears on-screen during multi-angle scenes on a DVD-Video disc.
	Off	Nothing is indicated on-screen when a multi-angle scene is showing.
Options		
On Screen Display	**On** •	The recorder displays operation displays (**Stop**, **Play**, etc.) on-screen.
	Off	Switches off the on-screen operation displays.
Front Panel Display	**On** •	The time is shown in the front panel display when the recorder is in standby.
	Off	The front panel display is switched off in standby (although it still lights dimly when setting a timer recording).
Remote Control Mode	**Recorder 1–3** *(default: Recorder 1)*	If you are using more than one recorder in the same room, set them to different IDs. This setting sets the recorder ID; to change the remote controller ID, press and hold **RETURN** then press **1**, **2** or **3** to set. The remote will only control a recorder with the same ID.
AV. Link	**This Recorder Only** •	Signals received through the AV input when the recorder is in standby are not passed through to the AV output.
	Pass Through	Signals received when in standby are passed though to the output for connected devices. (Note that during EPG data download, the EPG data is not passed through.)
When set to **Pass Through***, make sure to set Power Save (page 116) to* **Off***.*		
DivX VOD	**Registration Code**	Use to display the recorder's DivX registration code. See *DivX video compatibility* on page 10 and *DivX® VOD content* on page 11.

Setting	Options	Explanation
Set Preview *(HDD only)*	**Quick Preview** •	When in the Disc Navigator, the thumbnail video plays short excerpts from throughout the selected title. (Note that edited titles that will play normally from the beginning.)
	Normal	The thumbnail video plays from the beginning of the title.

Additional information about the TV system settings

About the input line system

This recorder is compatible with PAL, SECAM, 3.58 NTSC and PAL-60 TV systems. The Input Line System and Input Colour System settings determine how the recorder treats incoming video signals from an external input or the built-in TV tuner.

Please note the following points when changing the input line system:

- When the current input is a built-in tuner channel preset, changing the input line system will usually also affect the input line system of the **AV2 (INPUT 1/ DECODER)** input. However if the **AV2/L1 In** setting is set to **Decoder**, then the L2 input is affected instead.
- If, when the Input Line System setting is changed, the screen goes blank (due to incompatibility with your TV), you can switch back by pressing and holding the front panel ■ **STOP** button then pressing ⏏ **OPEN/CLOSE** (also front panel) while the recorder is stopped.
- When you switch the Input Line System setting the Copy List is erased. If you switch the setting using the ■ **STOP** button and ⏏ **OPEN/CLOSE** buttons as described above, there is no confirmation, so please use with care.
- You can't mix recordings of different TV line systems on the same disc.
- When you change this setting, the **Input Colour System** setting also changes (see below).

About NTSC on PAL TV

Depending on the Input Line System setting and the NTSC on PAL TV setting, the signal format output when the recorder is stopped varies as shown in the table below.

Input Line System	NTSC on PAL TV	Output when stopped
625 System	**Off**	**PAL**
	On	**PAL**
525 System	**Off**	**NTSC**
	On	**PAL–60**

About the input colour system

The available options of the Input Colour System setting depend on the Input Line System setting. The table below shows the different options available.

Input Line System	Built-in tuner	External input
625 System	**Auto**	**Auto**
	PAL	**PAL**
	SECAM	**SECAM**
525 System	*n/a*	**Auto**
		3.58 NTSC
		PAL–60

Additional information about component video output

If you switch the Component Video Out setting to **Progressive** when using a TV that is not compatible with progressive-scan video, you will not be able to see anything displayed on your TV. If this happens, press and hold the ■ **STOP** button on the front panel, then press ► **PLAY**. This will set the recorder's video output back to Interlace.

Selecting other languages for language options

1 Select 'Other' from the language list.

This option appears in the settings for DVD Menu Language, Audio Language, and Subtitle Language.

2 Select the language you want.

- Select by language name: Use the ⬅/➡ buttons to change the language.
- Select by code number: Press ⬇ then use the number buttons to enter the four-digit language code.

See *Language code list* on page 137 for a list of available languages and corresponding codes.

Chapter 15
Additional information

Minimum copying times

The table below shows the minimum HDD to DVD copying time for one hour of video.

Please note that not all discs are compatible with high-speed copying.[1] Check with the disc manufacturer for compatibility.

Rec mode		DVD disc type					
		DVD-R / 1 x DVD-RW / 1 x	DVD-RW / 2 x DVD-R DL DVD-RAM / 2 x	DVD+R / 2.4 x DVD+RW / 2.4 x DVD+R DL	DVD-RAM / 3 x DVD-RAM / 5 x	DVD-R / 4 x DVD-RW / 4 x DVD+R / 4 x DVD+RW / 4 x	DVD-R / 8 x /16 x DVD-RW / 6 x DVD+R / 8 x /16 x DVD+RW / 8 x
		1 x	2 x	2.4 x	3 x	4 x	6 x
SEP	10 h	6 mins.	3 mins.	**1*	2 mins.	1.5 mins.**1*	1.25 mins.**1*
SLP	8 h	7.5 mins.	4 mins.	**1*	2.5 mins.	2 mins.**1*	1.6 mins.**1*
EP	6 h	10 mins.	5 mins.	**1*	3.5 mins.	2.5 mins.**1*	2.2 mins.**1*
LP	4 h	15 mins.	7.5 mins.	6.3 mins.	5 mins.	4 mins.	3 mins.
SP	2 h	30 mins.	15 mins.	12.5 mins.	10 mins.	7.5 mins.	5.5 mins.
XP	1 h	60 mins.	30 mins.	25 mins.	20 mins.	15 mins.	11 mins.

Note that all times in the above table are approximate. Also that actual copy speed varies with the part of the disc being recorded.

**1 Titles recorded on DVD+R/+RW in SEP, SLP or EP modes cannot be high-speed copied.*

Note

1 Depending on the disc, the copy speed may be reduced (for example, although a 6 x disc is used, the copy may be made at 2 x speed).

Manual recording modes

The table below shows the approximate recording times for the HDD and the different DVD types in each manual recording mode, as well as the standard recording mode equivalents.

Video mode Off (HDD) VR mode (DVD)				Video mode On (HDD) Video mode (DVD), DVD+R/+RW		
Resolution*1	Level	Rec. time		Level	Rec. time	Resolution*1
352 x 240 / 352 x 288	MN 1	802 mins.		MN 1 *2,3	802 mins.	352 x 240 / 352 x 288
	MN 2	720 mins.		MN 2 *2,3	720 mins.	
	MN 3	600 mins.	SEP	MN 3 *2,3	600 mins.	
	MN 4	480 mins.	SLP	MN 4 *3	480 mins.	
	MN 5	420 mins.		MN 5 *3	420 mins.	
	MN 6	360 mins.	EP	MN 6 *3	360 mins.	
352 x 480 / 352 x 576	MN 7	300 mins.		MN 7	300 mins.	352 x 480 / 352 x 576
	MN 8	270 mins.		MN 8	270 mins.	
480 x 480 / 480 x 576	MN 9	240 mins.	LP	MN 9	240 mins.	720 x 480 / 720 x 576
	MN 10	230 mins.		MN 10	230 mins.	
	MN 11	220 mins.		MN 11	220 mins.	
544 x 480 / 544 x 576	MN 12	210 mins.		MN 12	210 mins.	
	MN 13	200 mins.		MN 13	200 mins.	
	MN 14	190 mins.		MN 14	190 mins.	
	MN 15	180 mins.		MN 15	180 mins.	
720 x 480 / 720 x 576	MN 16	170 mins.		MN 16	170 mins.	
	MN 17	160 mins.		MN 17	160 mins.	
	MN 18	150 mins.		MN 18	150 mins.	
	MN 19	140 mins.		MN 19	140 mins.	
	MN 20	130 mins.		MN 20	130 mins.	
	MN 21	120 mins.	SP	MN 21	120 mins.	
	MN 22	110 mins.		MN 22	110 mins.	
	MN 23	105 mins.		MN 23	105 mins.	
	MN 24	100 mins.		MN 24	100 mins.	
	MN 25	95 mins.		MN 25	95 mins.	
	MN 26	90 mins.		MN 26	90 mins.	
	MN 27	85 mins.		MN 27	85 mins.	
	MN 28	80 mins.		MN 28	80 mins.	
	MN 29	75 mins.		MN 29	75 mins.	
	MN 30	70 mins.		MN 30	70 mins.	
	MN 31	65 mins.		MN 31	65 mins.	
	MN 32	61 mins.	XP	MN 32	61 mins.	
	LPCM	61 mins.		LPCM	61 mins.	

[1] The first figure refers to when the Input Line System is set to 525 System; the second when set to 625 System.
*[2] Modes **MN1** to **MN3** not available when using DVD+R/+RW.*
*[3] Titles recorded at **MN6** or lower cannot be high-speed copied to DVD+R/+RW.*

- *Levels separated by a bold line show where there is a noticeable change in picture quality.*
- *Audio recording in all manual recording modes is in Dolby Digital 2 ch format, except for LPCM mode, which is in Linear PCM format.*
- *When recording to the HDD, recording for the times given will use approximately 4.7 GB of HDD space (equivalent to one recordable DVD).*
- See also *Recording* on page 52.

Troubleshooting

Incorrect operation is often mistaken for trouble and malfunction. If you think there is something wrong with this component, please check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after checking the points below, ask your nearest Pioneer authorized service center or your dealer to carry out repair work.

General

Problem	Remedy
The disc is automatically ejected after closing the disc tray	• Check that the disc is not an incompatible format disc (page 7). • Check that the disc is loaded properly (aligned in disc tray and label-side up). • Take out the disc and clean it (page 139). • Check that the disc has a region code compatible with the recorder.
Can't play a disc	• Check that the disc is a compatible format disc (page 7). • Take out the disc and clean it (page 139). • Check that the disc is loaded properly (aligned in disc tray and label-side up). • There may be condensation in the recorder. Leave the recorder for an hour or so for the condensation to evaporate. • During HDD recording, you can't play discs that are recorded with a Line System different to the current recorder setting. • DVD+R/+RW discs recorded using another recorder with copy-once protected recordings will not play in this recorder.
Can't record a disc	• Check that the disc is not an incompatible format disc (page 7). • Some DVD-RAM discs are not recordable until they have been initialized (page 66). This can take up to 1 hour.

Problem	Remedy
No picture	• Check that everything is connected properly (page 14). • Check that the connected TV and/or the AV amp/receiver is set to the correct input. • The recorder may be set to progressive scan with an incompatible TV. Reset to interlace by pressing and holding the front panel ■ **STOP** button then pressing ► **PLAY**.
All settings are reset	• If the recorder is unplugged (or there is a power failure) while the recorder is on, all the settings will be lost. • Make sure that you switch the recorder into standby before unplugging the power cord.
Remote control does not work	• If you connected this recorder to another Pioneer product using the **CONTROL IN** jack, point the remote control at the other component to use (page 14). • Set the remote control to the same ID number as the recorder (page 126). (When the batteries run down, the remote mode is automatically reset to **Recorder1**.) • Use the remote within its operating range (page 6). • Replace the batteries (page 6).
No sound or sound is distorted	• Make sure that the amp/receiver or TV is set to the correct input and the volume turned up. • There is no sound when the picture is paused, or during scanning or slow motion play. Press ► **PLAY** to resume regular playback. • DTS discs can only be played if this recorder is connected to a DTS decoder or DTS compatible amp/receiver. If you have connected a suitable decoder, also make sure that the **Initial Setup > Audio Out > DTS Out** setting is **On**. • Some 96 kHz discs do not output audio through the digital jack. In this case, switch the input of your amp/receiver to analog. • Check the audio cable connections (page 14). • If the sound is distorted, try cleaning the cable plugs.
Cannot switch a bilingual program	• During real-time copying it is not possible to switch audio channels. The main and sub channels are both output.
The picture from the external input is distorted	• If the video signal from the external component is copy-protected, you cannot connect via this recorder. Connect the component directly to your TV.
The picture is distorted	• Change the Input Line System setting (page 127). (You can also change it by pressing the ■ **STOP** button and ▲ **OPEN/CLOSE** on the front panel simultaneously with the recorder stopped.)

Problem	Remedy
Screen is stretched vertically or horizontally	• Make sure that the **TV Screen Size** setting (page 125) is correct for the kind of TV you have (see also page 130). • If you have a widescreen TV, check its aspect ratio settings. • This recorder's input switches into wide mode automatically according to the input signal. When the unit connected is not compatible with VIDEO ID-1 (widescreen signalling), set the connected component to output 4:3 aspect ratio (standard) video.
Can't play a disc recorded using this recorder on another player	• If the disc was recorded in Video mode, make sure that it's finalized (page 64). • Some players will not play recordable DVD discs, even when recorded in Video mode and finalized. • If the disc was recorded in VR mode, the other player must be specifically RW compatible in order to play it (page 7). • Discs recorded with copy-once material cannot be played on non-CPRM compatible players (page 54). • DVD-RW discs containing only a small amount of recorded material may not play on other players. Finalize the disc and try again.
During playback the picture is dark or distorted	• When a copy-protected disc is played via a VCR, the picture will not display correctly. Connect the recorder directly to your TV.
Can't record or does not record successfully	• Check that there is some remaining blank space on the DVD/HDD. • For a Video mode disc or DVD+R, check that the disc isn't already finalized. • Check the limits on the number of titles and chapters on a disc: – HDD: 999 titles – VR mode: 99 titles, 999 chapters per disc – Video mode disc: 99 titles per disc, 99 chapters per title – DVD+R/+RW: 49 titles per disc, 99 chapters per title (max 254 chapters per disc) • Check that the source you are trying to record is not copy protected. • For a VR formatted disc, check that the disc isn't locked (page 109). • Check that you are recording with the same TV system (PAL, NTSC, etc.) as the disc has already been recorded in. All recordings on a disc must be in the same TV system. When recording to the HDD, it is also necessary to set the Input Line System setting to match what you want to record (page 127). • The power may have failed during recording.

Problem	Remedy
Timer program doesn't record successfully	• When setting the recording channel, make sure you set the recorder's built-in TV tuner, not the TV's built-in tuner. • When recording to a Video mode disc, programs that are copy-once protected cannot be recorded. Use a VR mode formatted disc for copy-once material (page 54). • Two timer programs may have overlapped, in which case only the earlier one will record completely. • The power may have failed during recording.
After briefly unplugging or after a power failure the front panel display shows '--:--'	• A backup battery inside the recorder keeps the clock and other settings from being reset when there is no power to the recorder. After unplugging or a power failure, the battery keeps all settings for a period of several minutes. Reset the clock and other recorder settings to use the recorder again.
Front panel display shows 'LOCK' when a button is pressed	• The Child Lock is on; turn off in order to use the recorder (page 62).
Can't use One Touch Copy (HDD to DVD)	• Make sure that there is a recordable DVD-R/-RW loaded with some free space for recording and fewer than 99 titles already on the disc. Also make sure that for a Video mode disc or a DVD+R, the disc isn't finalized. • Make sure there is a recordable DVD+R/+RW loaded with some free space for recording and fewer than 49 titles already on the disc. • If you delete a title from a DVD+R/+RW disc, the number of remaining recordable titles may not decrease. • Further recording is not possible on a finalized DVD+R. Check that there isn't a disc menu on the disc you're trying to use. • If the title currently playing contains material that is copy-once protected, One Touch Copy will not work. • One Touch Copy can't be used for titles over 8 hours long when copying to DVD+R/+RW (though you can use a DVD+R DL). • One Touch Copy can't be used for **MN1** to **MN6**, **SEP**, **SLP** or **EP** titles when copying to DVD+R/+RW. • One Touch Copy doesn't work if the recorder is already recording to DVD.
Can't use One Touch Copy (DVD to HDD)	• Make sure that there is space available on the HDD and that there are fewer than 999 titles on the HDD. • One Touch Copy doesn't work if the recorder is already recording to the HDD.

Problem	Remedy
The picture freezes and the front panel and remote control buttons stop working	• Press ■ **STOP** then try restarting playback. • Press the front panel ⏻ **STANDBY/ON** button to switch the power off, then switch back on and restart playback. If the power fails to switch off, press and hold ⏻ **STANDBY/ON** for 5 seconds until the power switches off.

If the unit does not operate normally due to external effects such as static electricity, disconnect the power plug from the outlet and insert again to return to normal operating conditions.

On-screen displays and recorder displays

The table below shows a list of error messages that you may encounter when using the recorder and an explanation of their meaning.

Message	Explanation/Action
• Initializing disc. Please wait a moment.	When you load a blank DVD-RW or DVD+RW disc, the recorder automatically initializes it.
• Incompatible region number.	The disc loaded has an incompatible region number for the recorder and so will not play.
• Cannot record any more titles. **• No more space for file management data.**	The disc control data limit has been reached, or the maximum number of chapters and/or titles has been reached. Erase titles/chapters or combine chapters.
• This disc cannot be recorded. Undo the finalization.	The disc was finalized on a non-Pioneer DVD recorder. Undo the finalization in order to recording/editing.
• Cannot play this disc. **• This disc cannot be recorded.** **• Cannot read the CPRM information.** **• Could not record the information to the disc.** **• Cannot edit.** **• Could not initialize disc.** **• Could not complete finalization successfully.** **• Could not undo finalization successfully.** **• Could not successfully unlock the disc.**	The disc may be dirty or damaged. Take out the disc, clean it and retry. If the error persists, use a new disc. If the error appears even with a new disc, please consult a Pioneer Service Center.

Message	Explanation/Action
• Incompatible or unreadable disc.	The disc loaded is a playback-only disc type. This display may also appear if the disc is dirty or damaged.
• Cannot record to a disc that is not CPRM compatible. **• Cannot record this content using Video mode recording.** **• This video cannot be recorded to DVD+R/+RW.**	The video source is copy-once protected. Use a VR mode DVD-R/-RW disc with CPRM for recording.
• This content is copy protected.	The video source is copy-protected and cannot be recorded.
• Incorrect CPRM information.	The recorder could not read the CPRM information. The recorder may be damaged—please consult a Pioneer Service Center.
• Repairing disc. **• Repairing the HDD.**	During recording, the power was cut. This display appears when the power is restored.
• Could not repair the disc.	The recorder was unable to repair the disc after a power cut. The contents of the recording will be lost.
• Overheating has stopped operation. Press DISPLAY to clear message.	The internal temperature of the recorder has exceeded the operating limit. If this message reappears, please contact a Pioneer authorized service center.
• HDD optimization is recommended. This can be done using Disc Setup.	The HDD should be optimized (basically, HDD housekeeping) to maintain playback and recording performance.
• Please perform HDD optimization. This can be done using Disc Setup.	The HDD is in more urgent need of optimization in order to maintain performance.
• The HDD has not been sufficiently optimized. Please optimize again.	If this message appears repeatedly after optimizing the HDD it is likely that there is not enough free space on the HDD for optimization to complete properly. Please erase some titles from the HDD and optimize again.
• This channel's TV system is different from the recorder's setting.	The TV system (PAL, NTSC, etc.) of the current channel is different from the TV system settings of this recorder.

Message	Explanation/Action
• Recording failed due to a TV system mismatch. Press DISPLAY to clear message.	The timer recording failed because the TV system of the channel set for recording was different from the setting of the recorder.
• Playback has stopped because the TV system is different than the recording.	During recording or timer recording standby, the TV System (PAL, NTSC, etc.) of the playback video changed, causing playback to stop automatically.

Language code list

Language (Language code letter), **Language code**

Japanese (ja), **1001**
English (en), **0514**
French (fr), **0618**
German (de), **0405**
Italian (it), **0920**
Spanish (es), **0519**
Chinese (zh), **2608**
Dutch (nl), **1412**
Portuguese (pt), **1620**
Swedish (sv), **1922**
Russian (ru), **1821**
Korean (ko), **1115**
Greek (el), **0512**
Afar (aa), **0101**
Abkhazian (ab), **0102**
Afrikaans (af), **0106**
Amharic (am), **0113**
Arabic (ar), **0118**
Assamese (as), **0119**
Aymara (ay), **0125**
Azerbaijani (az), **0126**
Bashkir (ba), **0201**
Byelorussian (be), **0205**
Bulgarian (bg), **0207**
Bihari (bh), **0208**
Bislama (bi), **0209**
Bengali (bn), **0214**
Tibetan (bo), **0215**
Breton (br), **0218**
Catalan (ca), **0301**
Corsican (co), **0315**
Czech (cs), **0319**
Welsh (cy), **0325**
Danish (da), **0401**
Bhutani (dz), **0426**
Esperanto (eo), **0515**
Estonian (et), **0520**
Basque (eu), **0521**
Persian (fa), **0601**
Finnish (fi), **0609**
Fiji (fj), **0610**
Faroese (fo), **0615**
Frisian (fy), **0625**
Irish (ga), **0701**
Scots-Gaelic (gd), **0704**
Galician (gl), **0712**
Guarani (gn), **0714**
Gujarati (gu), **0721**
Hausa (ha), **0801**
Hindi (hi), **0809**
Croatian (hr), **0818**
Hungarian (hu), **0821**
Armenian (hy), **0825**
Interlingua (ia), **0901**
Interlingue (ie), **0905**
Inupiak (ik), **0911**
Indonesian (in), **0914**
Icelandic (is), **0919**
Hebrew (iw), **0923**
Yiddish (ji), **1009**
Javanese (jw), **1023**
Georgian (ka), **1101**
Kazakh (kk), **1111**
Greenlandic (kl), **1112**
Cambodian (km), **1113**
Kannada (kn), **1114**
Kashmiri (ks), **1119**
Kurdish (ku), **1121**
Kirghiz (ky), **1125**
Latin (la), **1201**
Lingala (ln), **1214**
Laotian (lo), **1215**
Lithuanian (lt), **1220**
Latvian (lv), **1222**
Malagasy (mg), **1307**
Maori (mi), **1309**
Macedonian (mk), **1311**
Malayalam (ml), **1312**
Mongolian (mn), **1314**
Moldavian (mo), **1315**
Marathi (mr), **1318**
Malay (ms), **1319**
Maltese (mt), **1320**
Burmese (my), **1325**
Nauru (na), **1401**
Nepali (ne), **1405**
Norwegian (no), **1415**
Occitan (oc), **1503**
Oromo (om), **1513**
Oriya (or), **1518**
Panjabi (pa), **1601**
Polish (pl), **1612**
Pashto, Pushto (ps), **1619**
Quechua (qu), **1721**
Rhaeto-Romance (rm), **1813**
Kirundi (rn), **1814**
Romanian (ro), **1815**
Kinyarwanda (rw), **1823**
Sanskrit (sa), **1901**
Sindhi (sd), **1904**
Sangho (sg), **1907**
Serbo-Croatian (sh), **1908**
Sinhalese (si), **1909**
Slovak (sk), **1911**
Slovenian (sl), **1912**
Samoan (sm), **1913**
Shona (sn), **1914**
Somali (so), **1915**
Albanian (sq), **1917**
Serbian (sr), **1918**
Siswati (ss), **1919**
Sesotho (st), **1920**
Sundanese (su), **1921**
Swahili (sw), **1923**
Tamil (ta), **2001**
Telugu (te), **2005**
Tajik (tg), **2007**
Thai (th), **2008**
Tigrinya (ti), **2009**
Turkmen (tk), **2011**
Tagalog (tl), **2012**
Setswana (tn), **2014**
Tonga (to), **2015**
Turkish (tr), **2018**
Tsonga (ts), **2019**
Tatar (tt), **2020**
Twi (tw), **2023**
Ukrainian (uk), **2111**
Urdu (ur), **2118**
Uzbek (uz), **2126**
Vietnamese (vi), **2209**
Volapük (vo), **2215**
Wolof (wo), **2315**
Xhosa (xh), **2408**
Yoruba (yo), **2515**
Zulu (zu), **2621**

Country/Area code list

Country/Area, **Country/Area code**, **Code letter**

Argentina, **0118**, **ar**
Australia, **0121**, **au**
Austria, **0120**, **at**
Belgium, **0205**, **be**
Brazil, **0218**, **br**
Canada, **0301**, **ca**
Chile, **0312**, **cl**
China, **0314**, **cn**
Denmark, **0411**, **dk**
Finland, **0609**, **fi**
France, **0618**, **fr**
Germany, **0405**, **de**
Hong Kong, **0811**, **hk**
India, **0914**, **in**
Indonesia, **0904**, **id**
Italy, **0920**, **it**
Japan, **1016**, **jp**
Korea, Republic of, **1118**, **kr**
Malaysia, **1325**, **my**
Mexico, **1324**, **mx**
Netherlands, **1412**, **nl**
New Zealand, **1426**, **nz**
Norway, **1415**, **no**
Pakistan, **1611**, **pk**
Philippines, **1608**, **ph**
Portugal, **1620**, **pt**
Russian Federation, **1821**, **ru**
Singapore, **1907**, **sg**
Spain, **0519**, **es**
Sweden, **1905**, **se**
Switzerland, **0308**, **ch**
Taiwan, **2023**, **tw**
Thailand, **2008**, **th**
United Kingdom, **0702**, **gb**
USA, **2119**, **us**

Screen sizes and disc formats

When viewing on a standard TV or monitor		
Screen format of disc	**Setting**	**Appearance**
16:9	**4:3 (Letter Box)**	The program is shown in widescreen with black bars at the top and bottom of the screen.
	4:3 (Pan & Scan)	The sides of the program are cropped so that the picture fills the whole screen.
4:3	**4:3 (Letter Box)** **4:3 (Pan & Scan)**	The program is presented correctly on either setting.

When viewing on a widescreen TV or monitor		
Screen format of disc	**Setting**	**Appearance**
16:9	**16:9**	The program is presented in widescreen.
4:3	**16:9**	Your TV will determine how the picture is presented—check the manual that came with the TV for details.

Handling discs

When holding discs of any type, take care not to leave fingerprints, dirt or scratches on the disc surface. Hold the disc by its edge or by the center hole and edge.

Damaged or dirty discs can affect playback and recording performance. Take care also not to scratch the label side of the disc. Although not as fragile as the recorded side, scratches can still result in a disc becoming unusable.

Should a disc become marked with fingerprints, dust, etc., clean using a soft, dry cloth, wiping the disc lightly from the center to the outside edge. Do not wipe with a circular motion.

If necessary, use a cloth soaked in alcohol, or a commercially available CD/DVD cleaning kit to clean a disc more thoroughly. Never use benzine, thinner or other cleaning agents, including products designed for cleaning vinyl records.

Storing discs

Although CDs and DVD discs are more durable than vinyl records, you should still take care to handle and store discs correctly. When you're not using a disc, return it to its case and store upright. Avoid leaving discs in excessively cold, humid, or hot environments (including under direct sunlight).

Don't glue paper or put stickers onto the disc, or use a pencil, ball-point pen or other sharp-tipped writing instrument. These could all damage the disc.

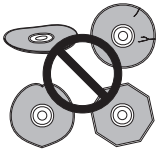
For more detailed care information see the instructions that come with discs.

Do not load more than one disc into the recorder.

Damaged discs

Discs spin at high speed inside the recorder. If you can see that a disc is cracked, chipped, warped, or otherwise damaged, don't risk using it; you could end up damaging the recorder.

This recorder is designed for use with conventional, fully circular discs only. Use of shaped discs is not recommended for this product. Pioneer disclaims all liability arising in connection with the use of shaped discs.



Cleaning the pickup lens

The DVD recorder's lens should not become dirty in normal use, but if for some reason it should malfunction due to dust or dirt, consult your nearest Pioneer-authorized service center. Although lens cleaners are commercially available, we do not recommend using them since some may damage the lens.

Condensation

Condensation may form inside the recorder if it is brought into a warm room from outside, or if the temperature of the room rises quickly. Although the condensation won't damage the recorder, it may temporarily impair its performance. For this reason you should leave it to adjust to the warmer temperature for about an hour before switching on and using.

Hints on installation

We want you to enjoy using this unit for years to come, so please bear in mind the following points when choosing a suitable location for it:

Do...

✓ Use in a well-ventilated room.

✓ Place on a solid, flat, level surface, such as a table, shelf or stereo rack.

Don't...

× Use in a place exposed to high temperatures or humidity, including near radiators and other heat-generating appliances.

× Place on a window sill or other place where the recorder will be exposed to direct sunlight.

× Use in a dusty or damp environment or in a room where it will be exposed to excessive cigarette smoke.

× Place directly on top of an amplifier, or other component in your stereo system that becomes hot in use.

× Use near a television or monitor as you may experience interference—especially if the television uses an indoor antenna.

× Use in a kitchen or other room where the recorder may be exposed to smoke or steam.

× Use on a thick rug or carpet, or cover with cloth—this may prevent proper cooling of the unit.

× Place on an unstable surface, or one that is not large enough to support all four of the unit's feet.

Moving the recorder

If you need to move the recorder, first remove the disc, if loaded, and close the disc tray. Next, press ⏻ **STANDBY/ON** to switch the power to standby, checking that the **POWER OFF** indication in the display goes off. Wait at least two minutes. Lastly, disconnect the power cord. Never lift or move the unit during playback or recording—discs rotate at a high speed and may be damaged.

Resetting the recorder

If you need to, you can reset the recorder to all its factory settings.

1 Make sure that the recorder is on.

2 Using the front panel controls, press and hold ■ STOP and press ⏻ STANDBY/ON.

The recorder turns off with all settings reset.

Specifications

General

Power requirements . . . . 220 V to 240 V, 50 Hz / 60 Hz
Power consumption
DVR-540H-S . . . . . .40 W
DVR-440H-S/DVR-440H-K . . . . . .39 W
Power consumption in standby mode 0.61 W
(Front panel display: off)
Weight . . . . . .4.3 kg
Dimensions . .420 mm (W) x 69 mm (H) x 318 mm (D)
Operating temperature . . . . . +5 °C to +35 °C
Operating humidity . . . . . 5 % to 85 %
(no condensation)
TV system . . . . . .PAL/SECAM/
NTSC (external input only)

Readable discs
DVD-Video, DVD-RW, DVD-R, DVD+R, DVD+RW, DVD-RAM, Video CD, Super VCD, CD, CD-R/-RW (WMA, MP3, JPEG, CD-DA)

Recording discs and formats
DVD-R/RW: VR mode and Video mode
DVD+R/+RW: +VR mode
DVD-RAM: VR mode
DVD-R DL: VR mode and Video mode
DVD+R DL: +VR mode

Video recording format
Sampling frequency . . . . . 13.5 MHz
Compression format . . . . . .MPEG
Audio recording format
Sampling frequency . . . . . 48 kHz
Compression format . . . . Dolby Digital or Linear PCM
(uncompressed)

Recording time
HDD
DVR-540H-S (160 GB)
Fine (XP) . . . . . Approx. 34 h
Standard Play (SP) . . . . . Approx. 68 h
Long Play (LP) . . . . . Approx. 136 h
Extended Play (EP) . . . . . Approx. 204 h
Super Long Play (SLP) . . . . . Approx. 272 h
Super Extended Play (SEP) . . . . . Approx. 340 h
Manual Mode (MN) . . . . . Approx. 34 h to 455 h
DVR-440H-S/K (80 GB)
Fine (XP) . . . . . Approx. 17 h
Standard Play (SP) . . . . . Approx. 34 h
Long Play (LP) . . . . . Approx. 68 h
Extended Play (EP) . . . . . Approx. 102 h
Super Long Play (SLP) . . . . . Approx. 136 h
Super Extended Play (SEP) . . . . . Approx. 170 h
Manual Mode (MN) . . . . . .Approx. 17 h to 227 h

DVD-R/-RW, DVD+R/+RW, DVD-RAM
Fine (XP) . . . . . Approx. 1 h
Standard Play (SP) . . . . . Approx. 2 h
Long Play (LP) . . . . . Approx. 4 h
Extended Play (EP) . . . . . Approx. 6 h
Super Long Play (SLP) . . . . . Approx. 8 h
Super Extended Play (SEP) . . . . . Approx. 10 h
(DVD-R/-RW, DVD-RAM only)
Manual Mode (MN)
DVD-R/-RW/-RAM . . . . . .Approx. 1 h to 13 h
DVD+R/+RW . . . . . .Approx. 1 h to 8 h

DVD-R DL/DVD+R DL
Fine (XP) . . . . . Approx. 1 h 51 m
Standard Play (SP) . . . . . Approx. 3 h 35 m
Long Play (LP) . . . . . Approx. 7 h 11 m
Extended Play (EP) . . . . . Approx. 10 h 46 m
Super Long Play (SLP) . . . . . Approx. 14 h 21 m
Super Extended Play (SEP) . . . . . Approx. 17 h 57 m
(DVD-R DL only)
Manual Mode (MN)
DVD-R DL . . . . . Approx. 1 h 51 m to 24 h
DVD+R DL . . . . . Approx. 1 h 51 m to 14 h 21 m

Timer

Programs . . . . . 1 month/32 programs
Clock . . . . . Quartz lock (24-hour digital display)

Tuner

Receivable channels

	SECAM B/G PAL B/G		PAL I	
	Frequency	Channel	Frequency	Channel
VHF (low)	47 MHz to 89 MHz	E2 to E4 X to Z	44 MHz to 89 MHz	A to C X to Z
VHF (high)	104 MHz to 300 MHz	E5 to E12 S1 to S20 M1 to M10 U1 to U10	104 MHz to 300 MHz	D to J 11, 13 S1 to S20
Hyper	302 MHz to 470 MHz	S21 to S41	302 MHz to 470 MHz	S21 to S41
UHF	470 MHz to 862 MHz	E21 to E69	470 MHz to 862 MHz	E21 to E69

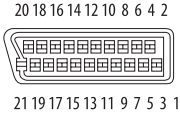
	SECAM L		SECAM D/K PAL D/K	
	Frequency	Channel	Frequency	Channel
VHF (low)	49 MHz to 65 MHz	FB, FC1, FC	49 MHz to 94 MHz	R1 to R5
VHF (high)	104 MHz to 300 MHz	F1 to F6 B to Q	104 MHz to 300 MHz	R6 to R12 S1 to S20
Hyper	300 MHz to 470 MHz	S21 to S41	302 MHz to 470 MHz	S21 to S41
UHF	470 MHz to 862 MHz	21 to 69	470 MHz to 862 MHz	E21 to E69

STEREO
B/G - A2
I - NICAM
L - NICAM
B/G - NICAM
D/K - NICAM

Input/Output

VHF/UHF antenna input/output terminal
.....VHF/UHF set 75 Ω (IEC connector)
Video input..... Input 2 (front)
Input level .....1 Vp-p (75 Ω)
Jacks .....AV connector 2 (Input 1),
RCA jack (Input 2)
Video output.....AV1, Output
Output level.....1 Vp-p (75 Ω)
Jacks ..... AV connector (AV1)
RCA jack (Output)
S-Video input ..... Input 2 (front)
Y (luminance) - Input level.....1 Vp-p (75 Ω)
C (colour) - Input level ..... 300 mVp-p (75 Ω)
Jacks .....AV connector 2 (Input 1),
4 pin mini DIN (Input 2)
S-Video output .....AV1, Output
Y (luminance) - Output level .....1 Vp-p (75 Ω)
C (colour) - Output level..... 300 mVp-p (75 Ω)
Jacks ..... AV connector 1 (AV1),
4 pin mini DIN (Output)
Component video output
Output level..... Y: 1.0 Vp-p (75 Ω)
P_B, P_R: 0.7 Vp-p (75 Ω)
Jacks ..... RCA jacks
RGB input
Input level ..... 0.7 Vp-p (75 Ω)
Jacks ..... AV connector 2 (Input 1)
RGB output
Output level..... 0.7 Vp-p (75 Ω)
Jacks .....AV connector 1 (AV1)
Audio input .....Input 2 (front) L/R
Input level
During audio input..... 2 V rms
(Input impedance: more than 22 kΩ)
Jacks .....AV connector 2 (Input 1),
RCA jacks (Input 2)
Audio output .....AV1, Output
During audio output..... 2 V rms
(Output impedance: less than 1.5 kΩ)
Jacks ..... AV connector 1 (AV1),
RCA jacks (Output)
Control input ..... Mini jack
Digital audio ouptut .....Coaxial
G-LINK™..... Mini jack

AV Connectors (21-pin connector assignment)
AV connector input/output..... 21-pin connector
This connector provides the video and audio signals for connection to a compatible colour TV or monitor.



PIN no.	AV1(RGB)-TV / AV2(INPUT 1)
1	Audio 2/R out / Audio 2/R out
2	– / Audio 2/R in
11	G out / G in
3	Audio 1/L out / Audio 1/L out
6	– / Audio 1/L in
15	R or C out / R or C in
4	GND
17	GND
7	B out / B in
19	Video out or Y out / Video out
20	– / Video in or Y in
8	Status
21	GND

Supplied accessories

Remote control 1
Dry cell batteries (AA/R6P).....2
Audio / Video cable (red/white/yellow) 1
G-LINK™ cable.....1
RF antenna cable.....1
Power cable 1
Operating Instructions
Warranty card 1

Note: The specifications and design of this product are subject to change without notice, due to improvement.

This product includes FontAvenue® fonts licenced by NEC corporation. FontAvenue is a registered trademark of NEC Corporation.

Published by Pioneer Corporation.
Copyright © 2006 Pioneer Corporation.
All rights reserved.

PIONEER CORPORATION
4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC.
P.O. BOX 1540, Long Beach, California 90810-1540, U.S.A. TEL: (800) 421-1404
PIONEER ELECTRONICS OF CANADA, INC.
300 Allstate Parkway, Markham, Ontario L3R OP2, Canada TEL: 1-877-283-5901
PIONEER EUROPE NV
Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium TEL: 03/570.05.11
PIONEER ELECTRONICS ASIACENTRE PTE. LTD.
253 Alexandra Road, #04-01, Singapore 159936 TEL: 65-6472-7555
PIONEER ELECTRONICS AUSTRALIA PTY. LTD.
178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: (03) 9586-6300
PIONEER ELECTRONICS DE MEXICO S.A. DE C.V.
Blvd.Manuel Avila Camacho 138 10 piso Col.Lomas de Chapultepec, Mexico,D.F. 11000 TEL: 55-9178-4270 **K002_A_En**

Printed in UK <VRB1411-A>